

DATASHEET

Flow

Insertion Electromagnetic Flow Meter Model PWF-E1700



**Flange connection
without ball valve**

**Thread connection
with ball valve**

**Flange connection
with ball valve**

**Battery supply flange connection
with ball valve**

Description

POKCENSER Insertion Electromagnetic Flow Meter is composed of electromagnetic sensor and electromagnetic flow converter, used to measure the conductive liquid that electrical conductivity is greater than 5us/cm. It retains the advantages of pipeline electromagnetic flowmeter, and overcome its installation difficulties and higher cost for large pipes. In particular, after adopting pressure opening and pressure installation technology, the Insert type electromagnetic flow meter can be installed without water, and can also be installed on cast iron pipes and cement pipes. It is used to measure water, sewage, acid, alkali and other mediums. Suitable for measuring large pipe of DN300-DN3000mm. Widely used to municipal water supply and drainage, industrial engineering, hydraulic engineering, etc.

Features

- No moving parts, simple structure and reliable operation
- Installation without cutting off the water supply under the condition of low pressure
- Transducer has no pressure loss, very low energy loss
- Small volume and light weight, save on shipping cost and it's convenient to install
- Cost is less for product and installation than other electromagnetic flowmeters, especially large diameter pipes
- Advanced low frequency square wave excitation, no zero point drift, high disturbance resistant and reliable operation

Specifications

Applicable Scene	Closed pipeline
Caliber Range	DN100-DN3000
Flow Range	0.01 m/s to 10m/s
Pressure Range	0.6-1.6Mpa
Temperature Resistance	-25~80℃
Accuracy	±1.5%, ±2.0%, ±2.5%
Protection Level	Sensor IP65\IP67\IP68 (optional), converter IP65
Output Type	Frequency, pulse, 4-20mA, RS485 Modbus protocol; Hart protocol (optional), Profibus DP (optional)
Power Supply	85~250V, 45~63Hz, 20VDC-36VDC, 3.6V battery power supply (DN100-1000)
Power Consumption	Less than 20 W
Lining Type	ABS, PTFE, F46, PFA
Electrode Type	316L, HB, HC, titanium, tantalum, platinum-iridium alloy, stainless steel tungsten carbide
Connection Method	Simple type, threaded ball valve type, flange ball valve type
Straight Pipe Section Requirements	Upstream 5DN, downstream 3DN
Sensor Material	304, 316 (optional)
Structure Form	Integrated type, split type
Cable Entry	M20*1.5, 1/2NPT
Indicator Type	LCD display with backlight
Flow Unit	m ³ /h, m ³ /m, m ³ /s, L/h, L/s, gal/h, gal/m, gal/s, bbl/h, bbl/m, bbl/s

Structure

Transducer is mainly constituted of measuring tube, excitation system, insertion pole, connecting box, mounting base, sealing and locating device etc.

Measuring tube: it is used to measure the flow rate of the fluid. It is made from insulating materials and is equipped with a pair of electrodes. Apart from the head or tube inwall, other parts are insulated from the measured fluid.

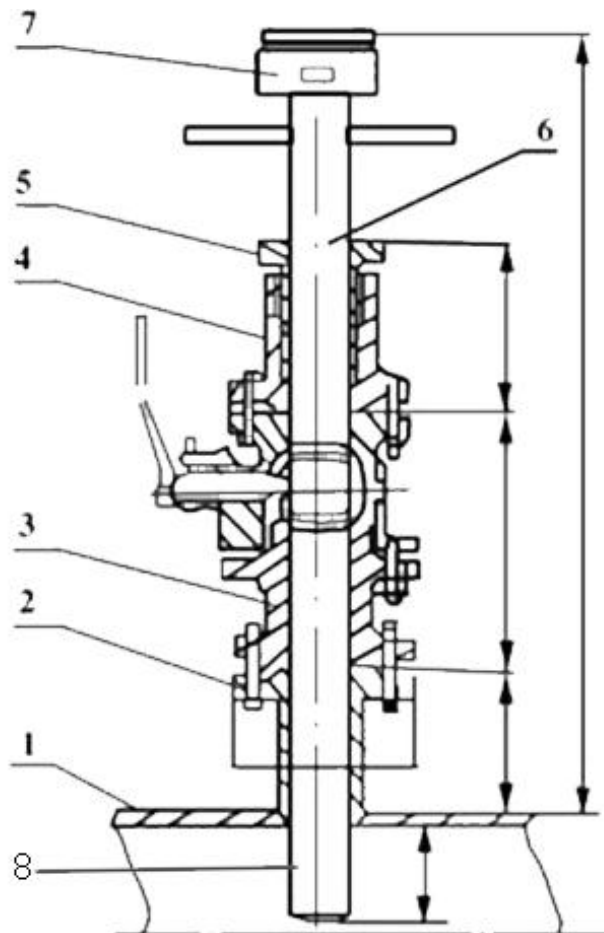
Excitation system: it is constituted of excitation coils and an iron core and is used to produce a magnetic field. It is sealed in and also insulated from the insertion pole.

Mounting base: It is welded to the measured pipeline and is used to install the part that connects the ball valve and transducer.

Sealing device: it is composed of compression thread base, gland nut, rubber washer and positioning screw. It is used to seal the electromagnetic transducer so as to enable it to bear some operating pressure.

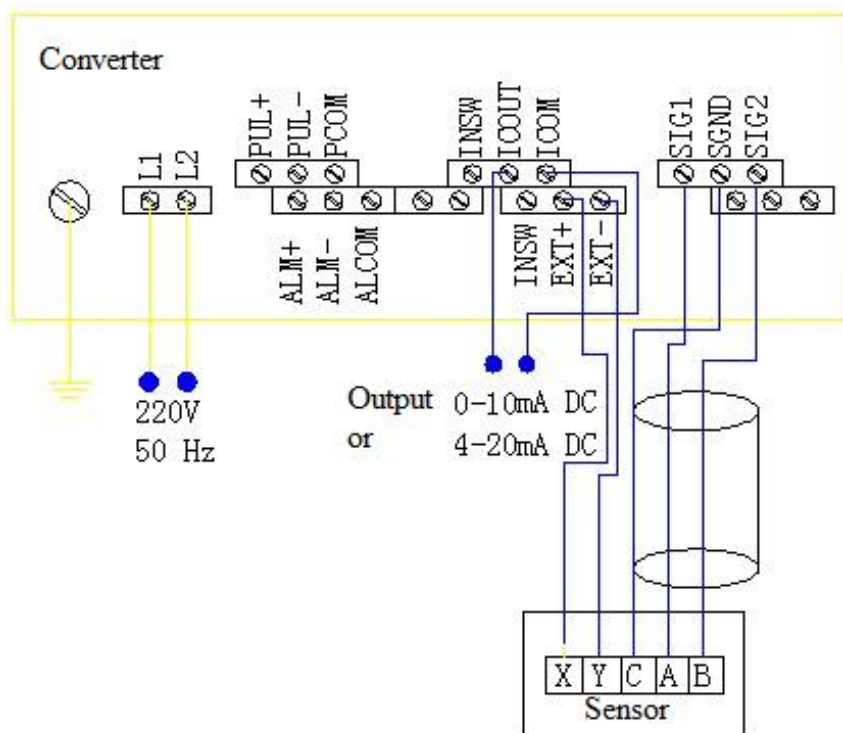
Insertion pole: It is made of stainless steel. The measuring head is fixed inside the insertion pole. The excitation lead and electrode lead get through the insertion pole, are sealed with the measured medium and connected to the connecting box. A directional indicating arm is welded to the insertion pole in order to ensure that magnetic field, flow rate and electrode wire are perpendicular to each other during installation, which conforms to Faraday's law of electromagnetic induction.

Connecting box: It is above the transducer. The amphenol connector inside the connecting box is used to connect the transducer and transverter.



1. measuring tube 2. connecting flange 3. ball valve 4. connecting flange 5. sealing head 6. sensor 7. connecting box 8. measuring system

Electrical Connection



How to Order

Example Part Number: **E17001200CSSL2S1T2M1C1V1**

Model	PWF-E1700		E1700
Nominal Diameter	300=DN300mm 350=DN350mm 400=DN450mm ... 3000=DN3000mm		1200
Structure	C=Compact type	S=Remote type(standard cable 10m)	C
Electrode	SS=316L Ta=Tantalum HC=Hastelloy C	Ti=Titanium HB= Hastelloy B PI=Platinum iridium alloy	SS
Lining	L1=ABS L3=F46	L2=PTFE L4=PFA	L2
Power Supply	S1=85~250VAC	S2=24VDC S3=3.2V Lithium battery	S1
Signal Output	T1= No output	T2=4-20mA/pulse output	T2
Communication	M1=RS485 Modbus RTU	M2=HART M3=GPRS	M1
Connection	C1=Thread	C2=Flange	C1
Installation	V0=Without a ball valve	V1=With a ball valve	V1