
## Feature

- ✓ **High Accuracy**
  Accuracy better than 1%.
- ✓ **Measure Range**
  Select different model sensors,can achieve DN15-DN6000mm pipe flow measurement
- ✓ **High Reliability**
  Adopt low voltage,multi-pulse radiating circuit.Accuracy,Lifetime and Reliability are better.
- ✓ **High Anti-interference**
  Adopt double balanced signal differencial transmission,receiving circuit,
  effective resist the drive,tower, Strong power lines and other source of interference.
- ✓ **Powerful Memory Function**
  Automatic memory the cumulative flow of 512 days before, 128 months before, 10 years before.
  Automatic memory the power-on and off of 64times before and the flow.
  Automatic memory the meter working condition of 32days before.
- ✓ **Support Temperature Sensor**
  Connect with Temperature sensor,it can measure heat flow.
- ✓ **Support SD card memory**
  Select SD card memory,it can realize mass storage by ultrasonic flowmeter

# PRODUCT INTRODUCTION

The AFT Ultrasonic Flowmeter widely used to measure different kinds of liquid.
Transmitter and transducer install seperately.Transmitter can install at indoor,Instrument cabinet,Dashboard.
Transducer install on the pipes. Transmitter and Transducer connect by special cable.
It can realize to measure flow.Connect with temperature sensor,it can measure heat flow.
Widely used in Running water,Heating, Water conservation,Metallurgy,Chemical industry,Machinery,Energy etc.
Used for production monitoring, water balance testing, thermal equilibrium network commissioning, energy monitoring.
It is most important flow measure instrument during manufacturing process.

# MEASUREMENT CONPOSITION

| Flow Measurement | Heat/Cold Energy | Feature |
|---|---|---|
|  Clamp On Type |  Water supply pipe Water return pipe | *Installation without drying up, no pressure loss<br>*Easy installation and maintenance<br>*Mating clamp temperature sensor that can measure the temperature of the outside of tube to achieve heat measure |
|  Insertion Type |  Water supply pipe Water return pipe | *Installation without drying up, no pressure loss<br>*Stable and reliable during lont-term operation<br>*Mating clamp temperature sensor that can measure the temperature of the outside of tube to achieve heat measure |
|  Pipe Type |  Water supply pipe Water return pipe | *Installation require drying off the pipe<br>*High accuracy,Stable and reliable during lont-termoperation<br>*Mating clamp temperature sensor that can measure the temperature of the outside of tube to achieve heat measure |

# TRANSMITTER

Due to different installation circumstance, choose different transmitter

*Wall-Mounted Type AFT
*Used to mount on the wall
*Dimension:170*180*56mm
*Power supply:
DC8-36V or AC85-264V

*Panel Mounted Type AFT
*Used for meter cabinsets installation
*Dimension:152*76mm
*Power supply:
DC8-36V or AC85-264V


*Explosion Proof Type AFT
*Used for hazardous area
*Dimension:298*298*110mm
*Power supply: DC8-36V or AC85-264V
*Ex-proof Class:DIIBT4

# TRANSDUCER

Due to different liquid,pipeline condition installation circumstance,choose different transducer

| Type | Picture | Specification | Model | Pipe Size | Temperature | Dimension |
|---|---|---|---|---|---|---|
| Standard Clamp On Type |  | Small | TS-2 | DN15~DN100 | -30~90℃ | 45×25×32mm |
| |  | Medium | TM-1 | DN50~DN700 | -30~90℃ | 64×39×44mm |
| |  | Large | TL-1 | DN300~DN6000 | -30~90℃ | 97×54×53mm |
| High Temperature Clamp On Type |  | Small | TS-2-HT | DN15~DN100 | -30~160℃ | 45×25×32mm |
| |  | Medium | TM-1-HT | DN50~DN700 | -30~160℃ | 64×39×44mm |
| |  | Large | TL-1-HT | DN300~DN6000 | -30~160℃ | 97×54×53mm |
| Insertion Type |  | Standard | TC-1 | DN80~DN6000 | -30~160℃ | 190×80×55mm |
| |  | longer type | TC-2 | DN80~DN6000 | -30~160℃ | 335×80×55mm |
| Pipeline Type |  | π | G3 | DN15~DN25 | -30~160℃ | SS304 Thread Connection |
| |  | Standard | G2 | DN32/DN40 | -30~160℃ | CS Thread Connection |
| |  | Standard | G1 | DN50~DN6000 | -30~160℃ | CS Flange Connection |

## Temperature Sensor

| Picture | Specification | Model | Measurement Range | | Installation Requirement | Accuracy |
|---|---|---|---|---|---|---|
|  | Three Wire PT100 Clamp Temperature Sensor | CT-1 | >DN50 | -40~160℃ | no need cut flow | 100℃ ±0.8℃ Temperature differece <0.1℃ after match accurately |
|  | Three Wire PT100 Insertion Temperature Sensor | TCT-1 | >DN50 | -40~160℃ | need cut flow | |
|  | Three Wire PT100 pressure installation insertion temperature sensor | PCT-1 | >DN50 | -40~160℃ | no need cut flow | |
|  | Small size three wire PT100 Insertion Type temperature sensor | SCT-1 | <DN50 | -40~160℃ | need cut flow | |

## SD Memory Card

SD card can realize the mass storage for ultrasonic flowmeter
Measuring data can deal with use our company software"flow data analysis, statistical''

**SD card memorize & cassette**

## Wall-mounted ultrasonic flowmeter selection code

**HBEUF- TYPE- Type of sensor - Length of cable ( ) m-DN( ) - SD card -coupling**

SW wall mounted
D Explosion proof type
M Module type

1 TS-2 standard small
2 TM-1 standard medium size
3 TL-1 Standard large
4 TS-2-HT high temperature miniature
5 TM-1-HT High temperature medium
6 TL-1-HT High temperature large
7 HS standard scaffolding type small
8 HM standard frame medium
9 EB-1 standard extension bracket
10 HS-HT high temperature scaffolding type small
11 HM-HT high temperature scaffolding medium
12 EB-1-HT high temperature extension bracket

insert type:
13 TC-1 Standard insert type
14 TC-2 extended insert type
15 TP-1 Parallel insert type

15-6000

1 without
2 with

1 No pipe collar
2 Piping hoop

Selection description: HBEUF-SW-2-5*2-DN100-2

Wall-mounted ultrasonic flowmeter, with standard medium-sized external attached sensor, cable length 5 meters *2, pipe diameter DN100, choose SD card

Selection description: HBEUF-SW-13-5*2-DN200-2-2

Insert type ultrasonic flowmeter, with standard plug-in sensor, cable length 5 meters *2, pipe diameter DN200, select SD card, pipe collar

# TECHNICAL PARAMETERS

| Type | Performance,specification | |
|---|---|---|
| **Transmitter** | Principle | Ultrasonic transit-time principle,Four-byte IEEE754 floating-point arithmetic |
| | Accuracy | Better than ±1% |
| | Display | LCD display with Chinese,English Display |
| | Output | One 4-20mA Current output,Impedance0-1K,Accuracy 0.1% |
| | | One OCT Pulse output(Width 6-1000ms,Default200ms) |
| | | One Relays output |
| | Input | Three 4-20mA Current input,accuracy 0.1%,can collect temperature, pressure,level signals etc. |
| | | Can connect with three-wire PT100 Plastnium resistance to measure heat flow. |
| | Data Interface | Isolated RS485 interface, can upgrade flowmeter through PC,support modbus |
| **Cable** | Normal below 50m;Select RS485 Communication,Transmission distance can over thousand meters. | |
| **Pipe Condition** | material | Steel,Stainless steel,Cast iron,copper,PVC,aluminium,FRP etc.(liner allowed) |
| | Diameter | 15~6000mm |
| | Installation | Upstream 10D,downstream 5D,30D away from the pump outlet(D for diameter) |
| **Medium** | Fluid | Water,sea water,acid liquid,beer,alcohol,oil and any other liquid that can spread sonic |
| | Temperature | —30~160 ℃ |
| | Turbidity | 10000ppm and with little bubbles |
| | Velocity | 0 ~± 10m/s |
| **Operating Environment** | Temperature | Transmitter:-20~60 ℃;Transducer:-30~160 ℃ |
| | Humidity | Transmitter:85%RH;transmitter protection grade:IP68;Water Depth<2m |
| **Power Supply** | DC8-36V or AC85-264V | |
| **Consumption** | 1.5W | |