

# Ultrasonic Flowmeter PS116



## About PS116

PS116 Portable Ultrasonic Flowmeter enables the user to do flow measurement checks at many points in a flow process without the need for a permanent installation.

This universal transit-time meter features a dual-function push button interface, ergonomic handheld design and a beautiful backlit color digital display that significantly simplifies setup and data collection.

Comparing with other traditional flowmeter or ultrasonic flowmeter, it has distinctive features such as high precision, high reliability, high capability and low cost, the flowmeter features other advantages:

- TVT technology designed.
- Less hardware components, low voltage broadband pulse transmission, low consumption power.
- Clear, user-friendly menu selections make flowmeter simple and convenient to use.
- Daily, monthly and yearly totalized flow.
- Parallel operation of positive, negative and net flow totalizes with scale factor (span) and 7 digit display.

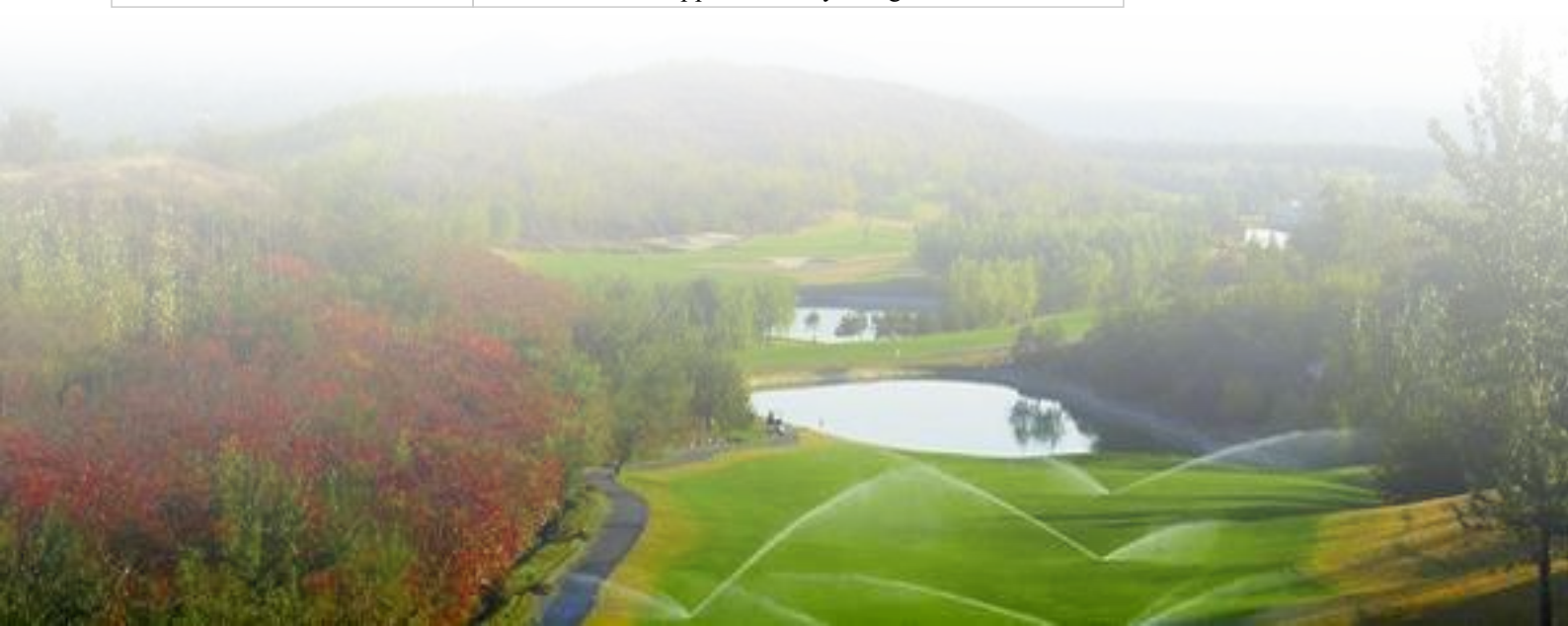


## Applications

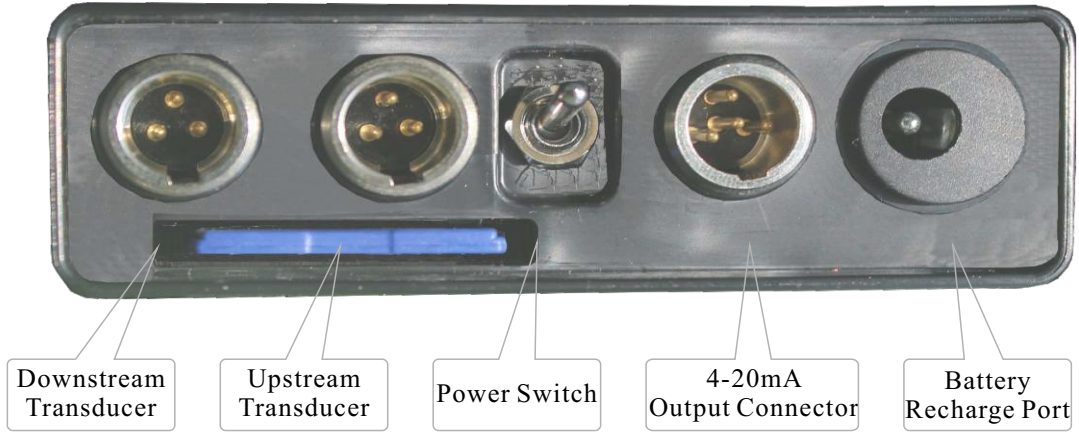


## Specification

Performance specifications	
Flow range	$\pm 0.03$ ft/s ~ $\pm 20$ ft/s ( $\pm 0.01$ m/s ~ $\pm 6$ m/s)
Accuracy	$\pm 1\%$ of measured value
Pipe size	Clamp-on: 1"~48" (25mm~1200mm)
Fluid	Water.
Pipe material	Carbon steel, stainless steel, PVC.
Function specifications	
Outputs	Analog output: 4~20mA, max load 750 $\Omega$ .
SD Card	Storage: 1GB (To prevail in kind) Max: 512 files Interval: 5~60 seconds
Power supply	11.1V rechargeable Lithium Battery Power (continuous operation of main battery 16 hours)
Keypad	Tactile Keys
Display	64 $\times$ 128 alphanumeric, back lit LCD.
Temperature	Transmitter: 14°F~122°F (-10°C~50°C) Transducer: 32°F~176°F (0°C~80°C)
Humidity	Up to 99% RH, non-condensing
Physical specifications	
Transmitter	NEMA 13, IP54.
Transducer	Encapsulated design, IP68.
Transducer cable	Standard cable length: 16ft (5m).
Weight	Transmitter: approximately 1.0kg.

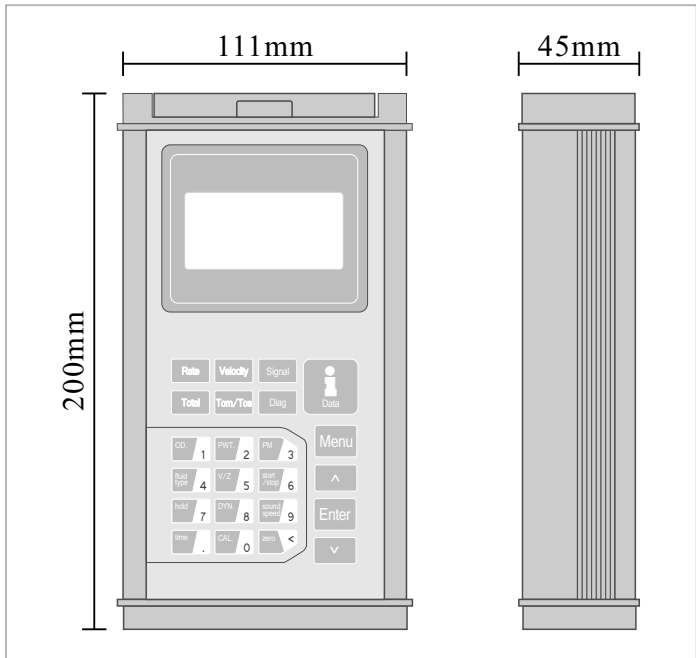


## Wiring Diagram

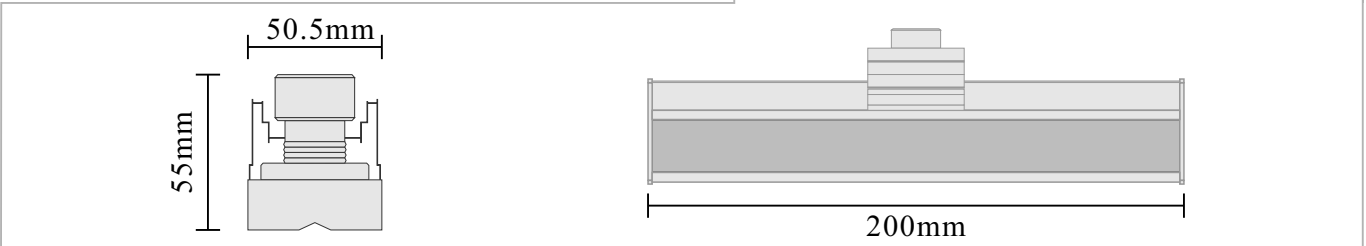
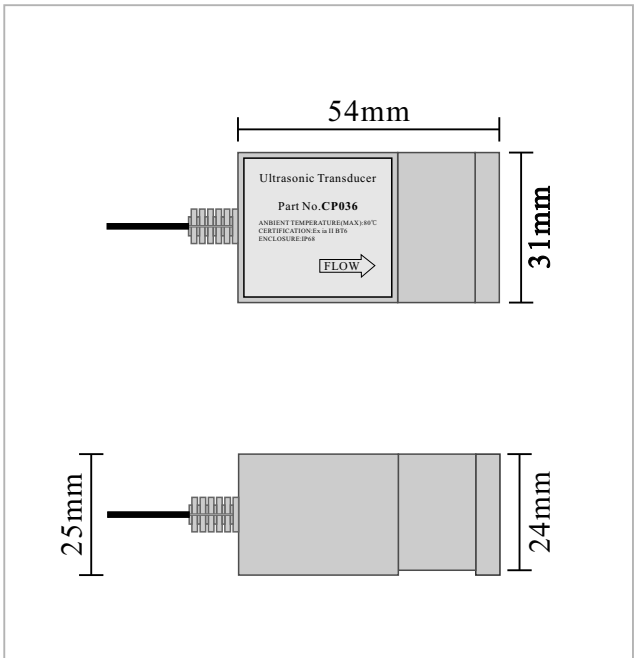


## Transmitter Dimensions

Transmitter



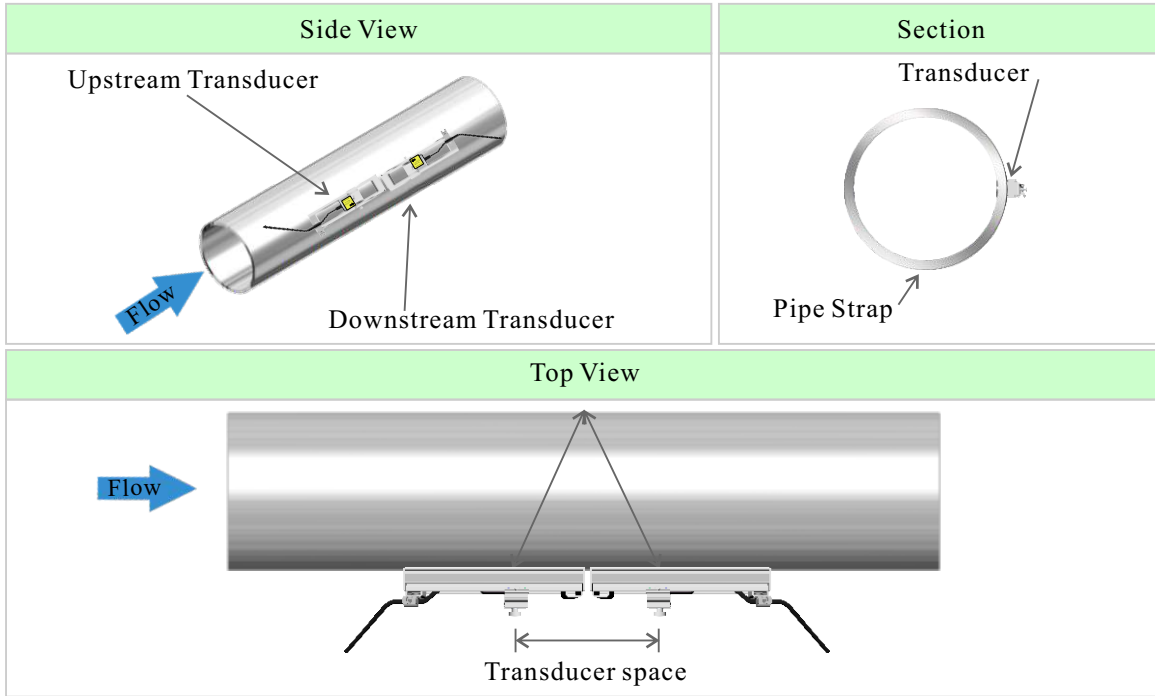
Transducer



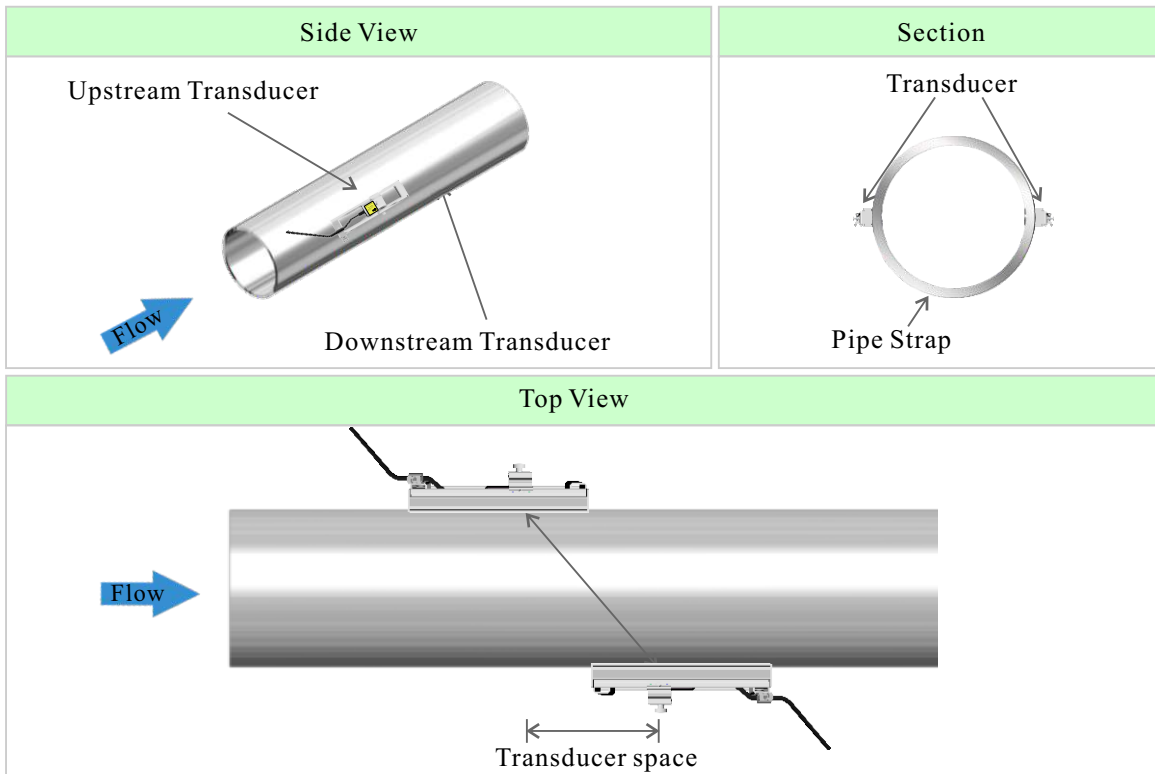


# Transducer Installation Methods

V method measuring pipe size : 50mm-400mm



Z method measuring pipe size: 25mm-1200mm



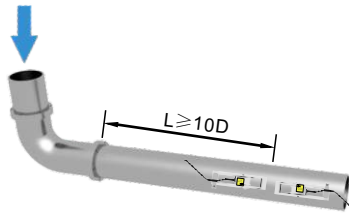
# Installation Site Selection

When selecting a measurement site, it is important to select an area where the fluid flow profile is fully developed to guarantee a highly accurate measurement. Use the following guidelines to select a proper installation site:

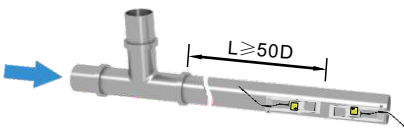
1. Choose a section of pipe that is always full of liquid, such as a vertical pipe with flow in the upward direction or a full horizontal pipe.
2. Ensure enough straight pipe length at least equal to the figure shown below for the upstream and downstream transducers installation.
3. Ensure that the pipe surface temperature at the measuring point is within the transducer temperature limits.
4. Consider the inside condition of the pipe carefully. If possible, select a section of pipe where the inside is free of excessive corrosion or scaling.

## Straight length of upstream piping

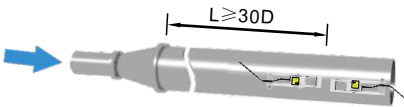
### 90° Bend



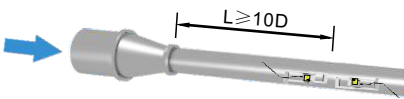
### Tee



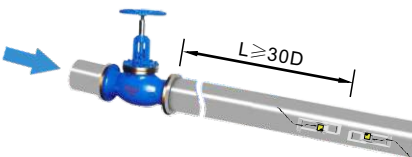
### Diffuser



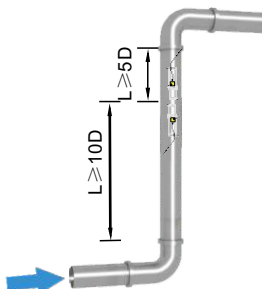
### Reduce



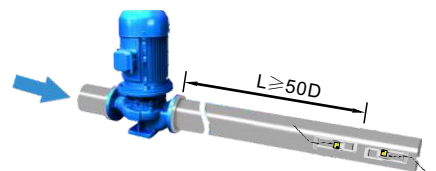
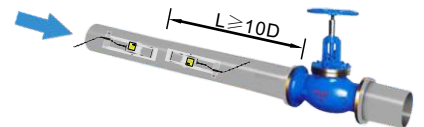
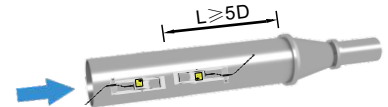
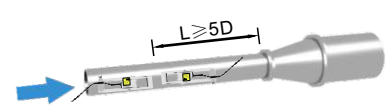
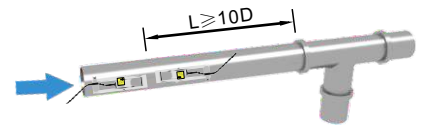
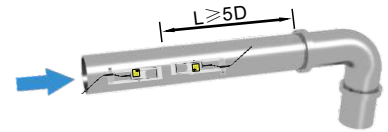
### Valve



### Vertical



## Straight length of downstream piping



## Ordering Information

Model	Description
PS116	Handheld Ultrasonic Flowmeter Installation method: Handheld 1G SD card high memory data logging, maximum memorize 512 days data. Flow Range: $\pm 0.03$ ft/s ~ $\pm 20$ ft/s ( $\pm 0.01$ m/s ~ $\pm 6$ m/s) Accuracy: $\pm 1\%$ of measured value Repeatability: 0.3% Output: 4-20mA Internal lithium power supply: 16hours Pipe size range: 1"~48"(25mm~1200mm) Transducer: IP68, CP magnet portable transducer, 5m cable
Code	Type of transducers
CP036	CP type magnet portable transducer Operating temperature: $32^{\circ}\text{F}$ ~ $+122^{\circ}\text{F}$ ( $0^{\circ}\text{C}$ ~ $+50^{\circ}\text{C}$ )
Code	Transducer Cable Length
016	CP type of cable Standard 16ft (5m)
xx	Maximum lengthen to 30m, per 5m is a lengthen unit.
Standard Model: PS116-CP036-016 Description: Handheld Ultrasonic Flowmeter with portable transducers,5m cable	

## Packaging



- ① Carrying Case
- ② Transmitter
- ③ Transducer with scaled rack
- ④ Pipe strips
- ⑤ Grease Coupling Compound
- ⑥ Battery charger

## Product Line

### DS116 Dedicated Ultrasonic Flowmeter



Accuracy:  $\pm 1\%$   
Flow range: 0.03 ~  $\pm 20$ ft/s  
Pipe Size Range: 1"~48"

### PS116 Portable Ultrasonic Flowmeter



Accuracy:  $\pm 1\%$   
Flow range: 0.03 ~  $\pm 20$ ft/s  
Pipe Size Range: 1"~48"

### DS348D Plus Multipath Ultrasonic Flowmeter



Accuracy:  $\pm 0.5\%$   
Flow range: 0.03 ~  $\pm 23$ ft/s  
Pipe Size Range: 4"~200"

### PS118i Portable Ultrasonic Flowmeter



Accuracy:  $\pm 0.5\%$   
Flow range: 0.03 ~  $\pm 40$ ft/s  
Pipe Size Range: 0.6"~240"

Remark: The above mode choose doesn't including the spool piece, it is for customization.

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