

pFlow

Ultrasonic Flowmeter P116



About P116

P116 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, while the output of totalize pulse and frequency output are transmitted via relay and open collector.



Applications

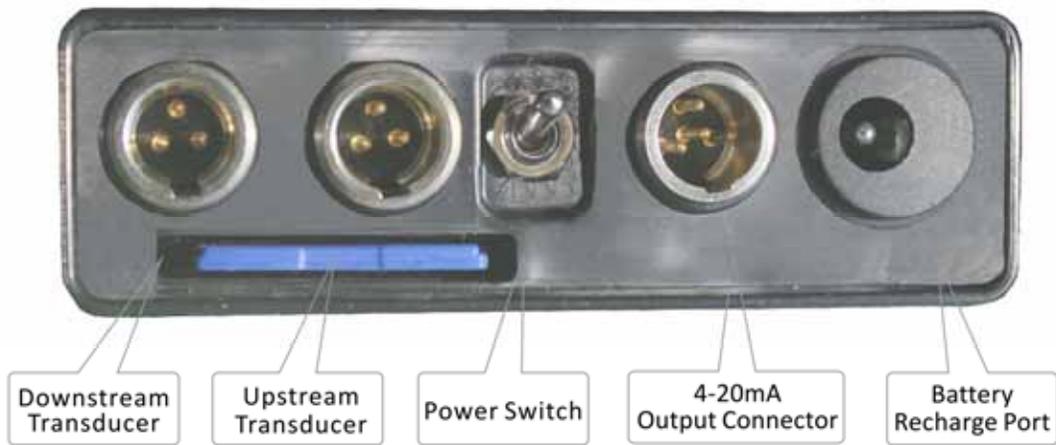


Specification

Performance specifications	
Flow range	±0.03 ft/s ~ ±40 ft/s (±0.01 m/s~ ±12 m/s)
Accuracy	±1% of measured value
Pipe size	Clamp-on: 1"~48" (25mm~1200mm)
Fluid	Water.
Pipe material	Carbon steel, stainless steel, PVC.
Function specifications	
Outputs	OCT Pulse output: 0~5000Hz. Analog output: 4~20mA, max load 750Ω.
Communication interface	RS485 MODBUS
Power supply	11.1V rechargeable Lithium Battery Power (continuous operation of main battery 16 hours)
Keypad	Tactile Keys
Display	64×128 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	NEMA13, IP54.
Transducer	Encapsulated design, IP68.
Transducer cable	Standard cable length: 16ft(5m).
Weight	Transmitter: approximately 1.0kg.

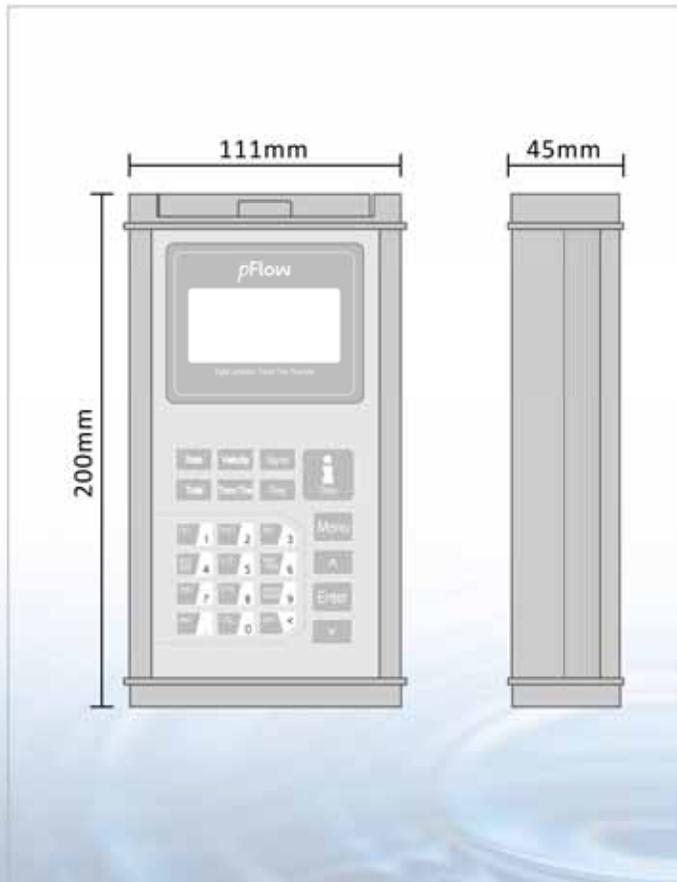


Wiring Diagram

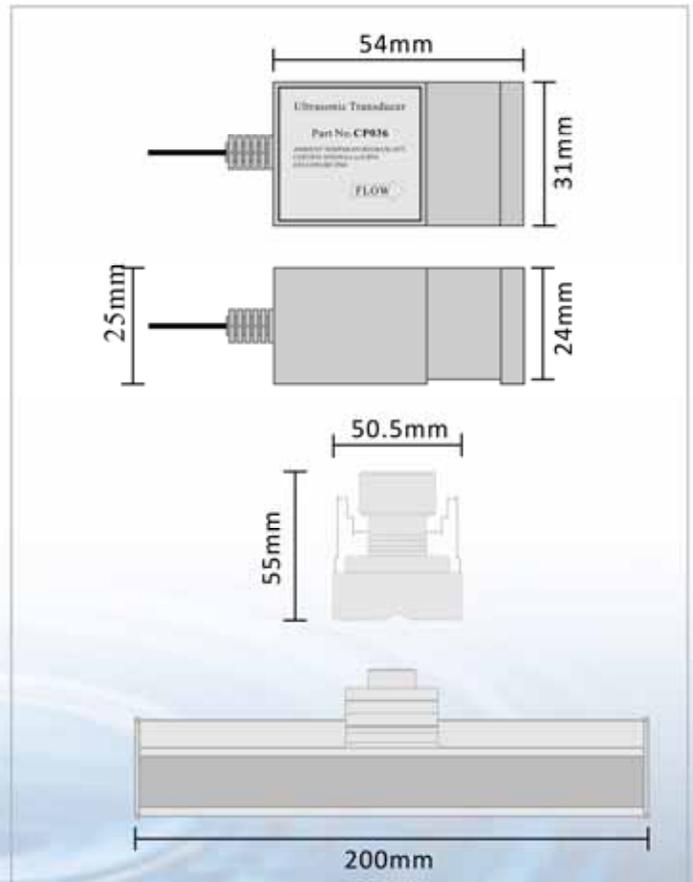


Transmitter Dimensions

Transmitter

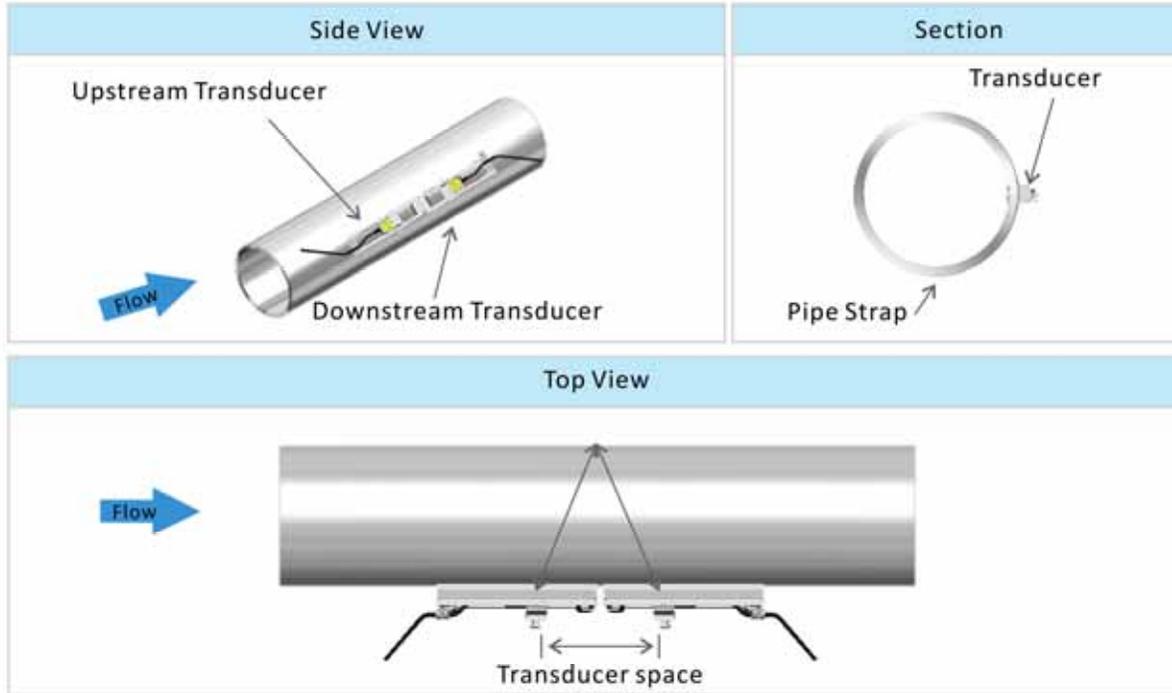


Transducer

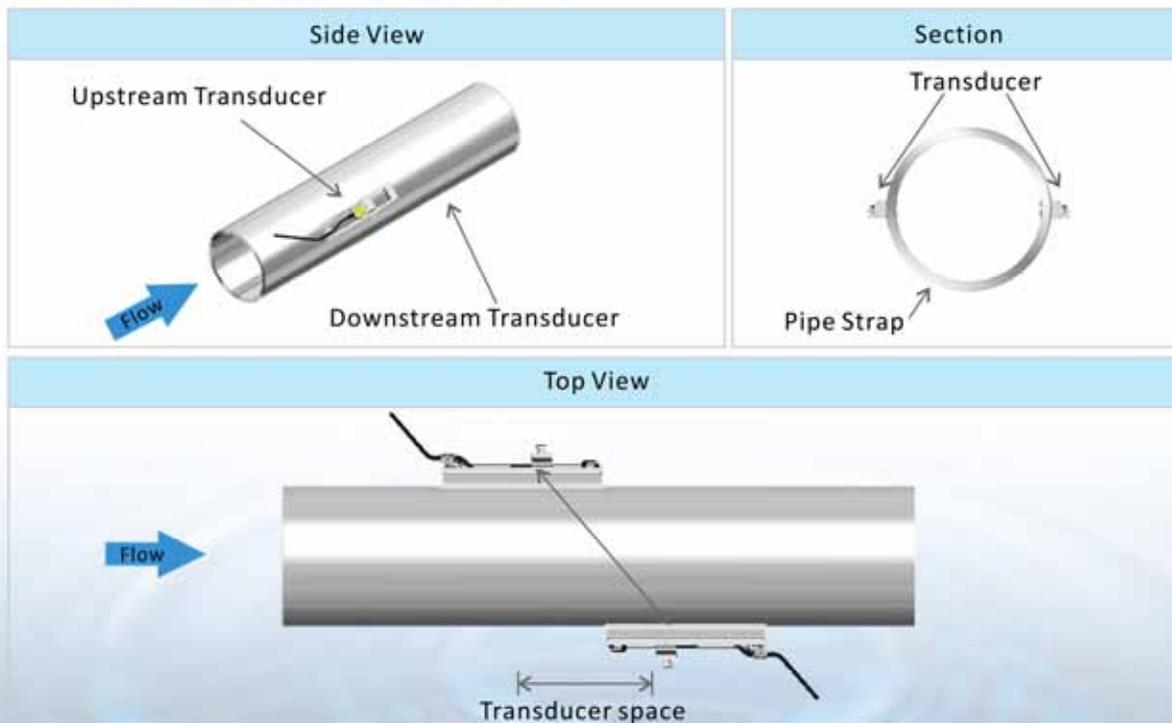


Transducer Installation Methods

V method measuring pipe size : 50mm-400mm



Z method measuring pipe size: 25mm-1200mm



Installation Site Selection

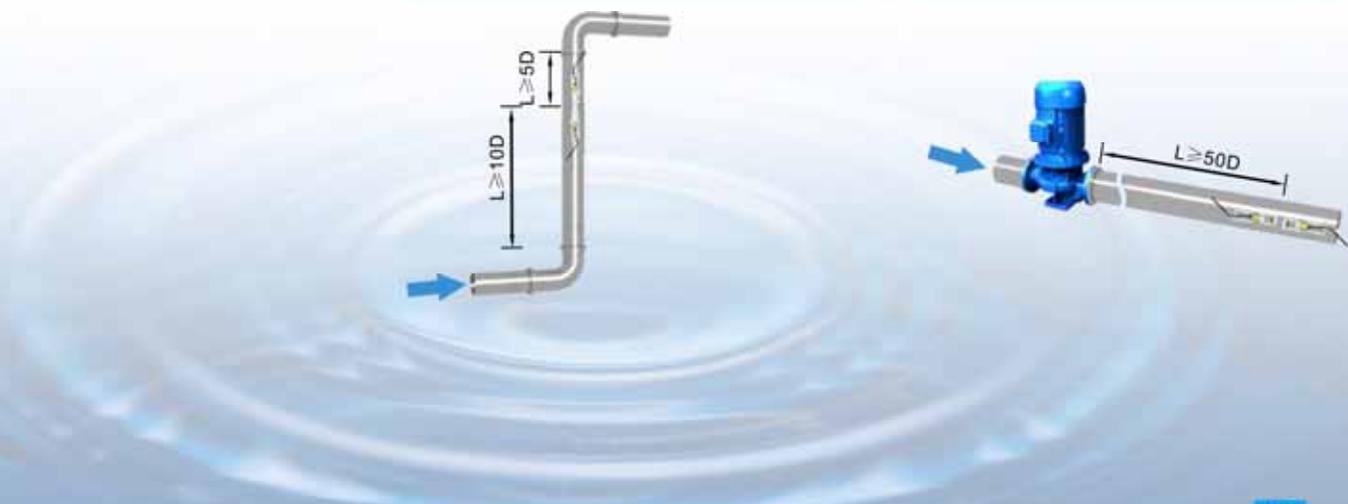
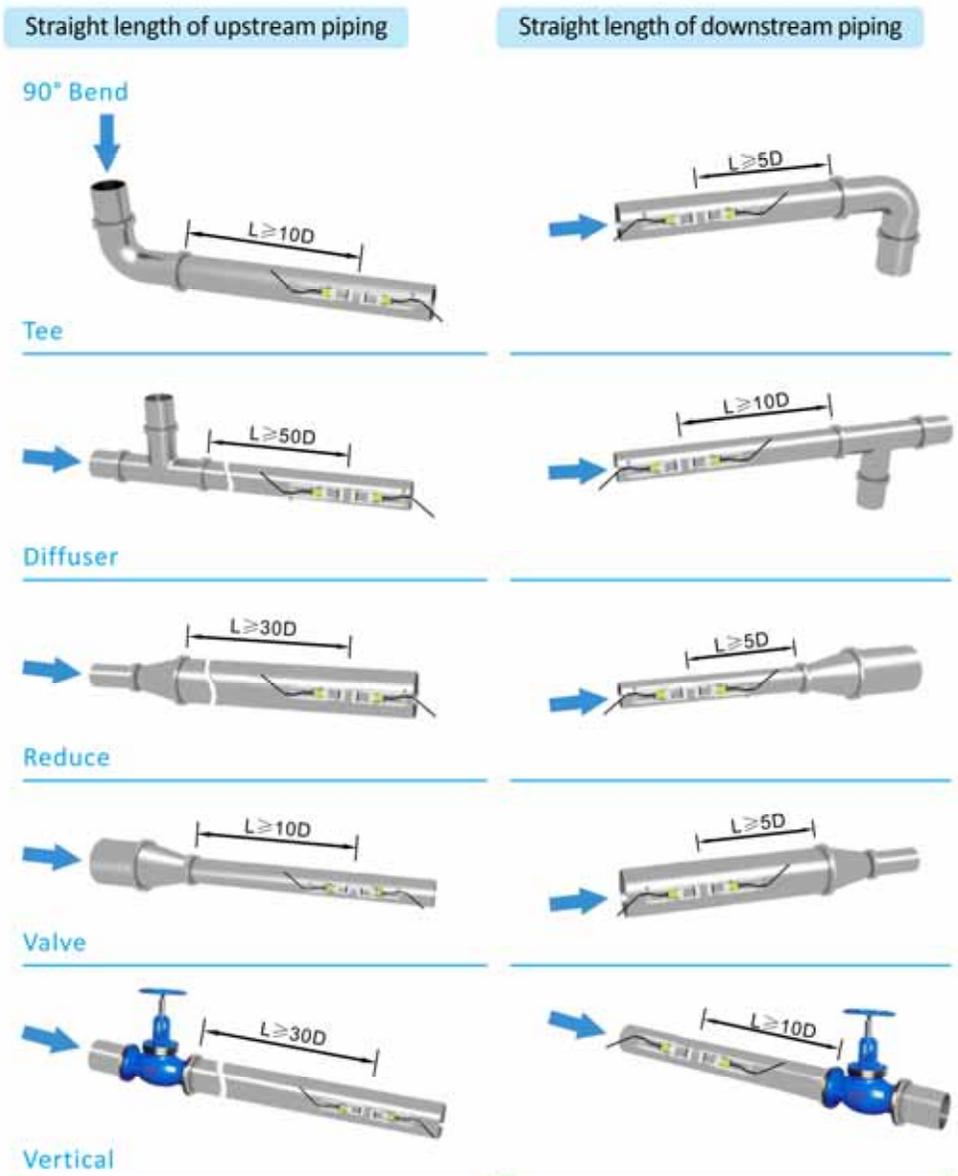
When selecting a measurement site, it is important to select an area where the fluid flow profile is fully developed to guarantee a highly accurate measurement. Use the following guidelines to select a proper installation site:

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.

Ensure enough straight pipe length at least equal to the figure shown below for the upstream and downstream transducers installation.

Ensure that the pipe surface temperature at the measuring point is within the transducer temperature limits.

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.



Ordering Information

Description	
P116	Handheld Ultrasonic Flowmeter Installation method: Handheld 1G SD card high memory data logging, maximum memorize 512 days data. Flow Range: ± 0.03 ft/s \sim ± 40 ft/s (± 0.01 m/s \sim ± 12 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
Type of transducers	
CP036	CP type magnet portable transducer Operating temperature: $32^{\circ}\text{F} \sim +122^{\circ}\text{F}$ ($0^{\circ}\text{C} \sim +50^{\circ}\text{C}$)
Transducer Cable Length	
016	CP type of cable Standard 16ft (5m)
xx	Maximum lengthen to 30m, per 5m is a lengthen unit.
Standard Model: P116-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