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## ABOUT P117 — FEATURES AND CASES

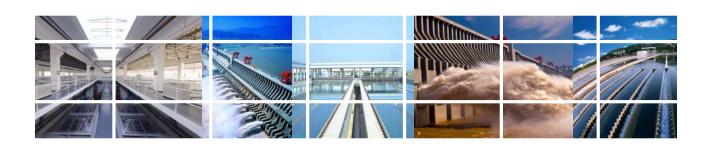


P117 Portable Ultrasonic Flowmeter enables the user to doflow measurement checks at many points in a flow processwithout the need for a permanent installation.

This universal transit-time meter features a dual-function push button interface, ergonomic handheld design and abeautiful 3.5 in TFT backlit 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 simpleand 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 isplay, while the output of totalize pulse and frequency output are transmitted viarelay and open collector.





#### **PERFORMANCE SPECIFICATIONS**

Flow range	±0.03 ~ ±20 ft/s (±0.01~ ±6 m/s)
Accuracy	±1%.
Repeatability	0.3%.
Linearity	±1%.
Pipe Size	Clamp-on:1"~ 48" in(25mm~1200mm)

#### **FUNCTION SPECIFICATIONS**

Outputs	Analog output: 4~20mA, Max 750 $\Omega$ .
SD card	Storage: 8GB; Max: 512 files; Interval: 1 ~ 60 seconds.
Power supply	rechargeable Lithium Battery Power (continuous operation of mainbattery 10 hours).
Keypad	Tactile Keys.
Display	3.5 inch TFT screen( 320 × 240 ), backlit LCD.
Temperature	Transmitter: $14^{\circ}F^{-1}22^{\circ}F(-10^{\circ}C^{-5}0^{\circ}C)$ Transducer: $40^{\circ}F^{-1}76^{\circ}F(-40^{\circ}C^{-8}0^{\circ}C)$
Humidity	0 to 99% RH,non-condensing

#### **PHYSICAL SPECIFICATIONS**

Transmitter	NEMA13 (IP54).
Transducer	Encapsulated design, IP68;
	Standard cable length: 5m.
Weight	Transmitter:approximately1.0kg.



Suitcase











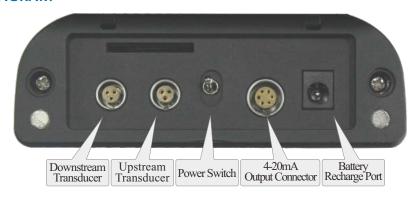
Transmitter and Transducer

Pipe strips

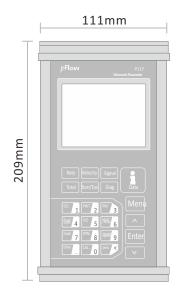
Card reader and SD card

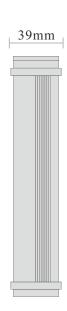


#### **WIRING DIAGRAM**

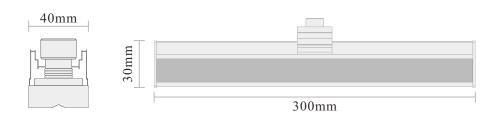


#### TRANSMITTER DIMENSIONS



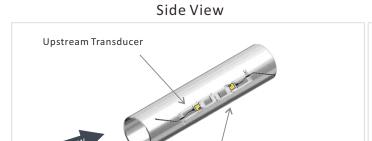


#### **TRANSDUCER**

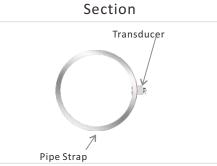


# ABOUT P117 — TRANSDUCER INSTALLATION METHODS

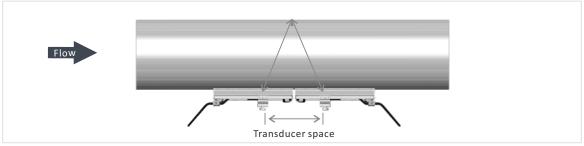
#### V method measuring pipe size: 50mm-400mm



Downstream Transducer

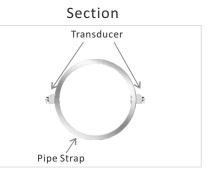


Top View

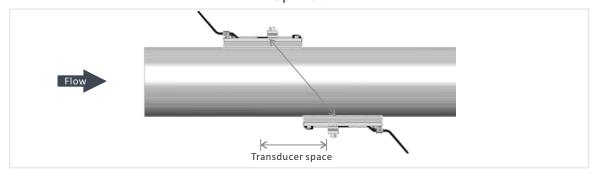


#### Z method measuring pipe size: 25mm-1200mm





Top View





### **INSTALLATION SITE SELECTION**

#### **STRAIGHT LENGTH OF UPSTREAM PIPING**

90° Bend

STRAIGHT LENGTH OF **DOWNSTREAM PIPING** 

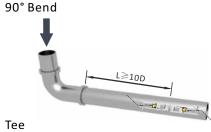
When selecting a measurement site, it is important to select an area where the fluid flow profile is fully developed to guarantee a highly accurate measurement. Use the following guidelines to select a proper installation site:

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.













Valve







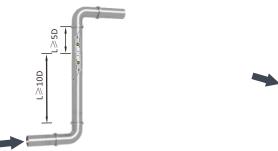
















#### MODEL DESCRIPTION

	Portable Ultrasonic Flowmeter Installation method: Handheld 8G SD card high memory data logging, maximum memorize 512 days data. Flow Range: ±0.03 ft/s ~ ±20 ft/s (±0.01 m/s~ ±6 m/s)
P117	Accuracy: ±1% Repeatability: 0.3% Output: 4-20mA Internal lithium power supply: 10hours Pipe size range: 1"~48"(25mm~1200mm) Transducer: IP54, CP magnet portable transducer, 5m cable

#### CODE TYPE OF TRANSDUCERS

P011	P type magnet portable transducer Operating temperature: $40^{\circ}F^{-1}76^{\circ}F(-40^{\circ}C^{-8}0^{\circ}C)$
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#### CODE TRANSDUCER CABLE LENGTH

016	P type of cable Standard 16ft (5m)
xx	Maximum lengthen to 305m, per 5m is a lengthen unit.

Standard Model: P117-P011-016

Description: Portable transducers, 5m cable.

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