



# pFlow

Wall Mount Ultrasonic Flowmeter D116

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Installation demo



SCAN ME

# ABOUT D116

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## FEATURES AND CASES



D116 Series Ultrasonic Flowmeter is a state-of-the-art universal transit-time flowmeter designed using FPGA chip and low-voltage broadband pulse transmission.

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

The flow meter features other advantages:

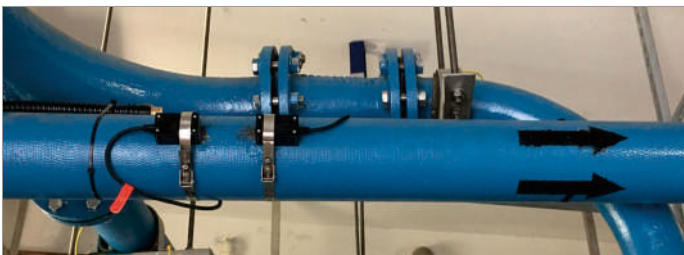
TVT technology designed.

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.

This flow meter is designed for a permanent wall mount operation for continuous flow measurement.



# ABOUT D116 SPECIFICATION

## PERFORMANCE SPECIFICATIONS

Flow range	$\pm 0.03\text{ft/s} \sim \pm 16\text{ft/s}$ ( $\pm 0.01\text{m/s} \sim \pm 5\text{m/s}$ )
Accuracy	$\pm 1.0\%$ of measured value
Pipe size	Clamp-on: 1"~48" (25mm~1200mm)
Fluid	Water
Pipe material	Carbon steel, SS, Iron, copper, PVC, aluminium, asbestos, fiberglass-epoxy

## FUNCTION SPECIFICATIONS

Limitations: Only works with these pipe materials with water, not suitable for pipes with a liner, no data logging on this model - Please ask us what models can work for your application.

Outputs	OCT Pulse output: 0~5000Hz. Analog output: 4~20mA, max load 750 $\Omega$ .
Communication interface	RS485 MODBUS
Power supply	10~36VDC/1A
Keypad	16(4 $\times$ 4)key with tactile action
Display	20 $\times$ 2 lattice alphanumeric, back lit LCD.
Temperature	Transmitter: 14 $^{\circ}$ F~122 $^{\circ}$ F (-10 $^{\circ}$ C~50 $^{\circ}$ C) Transducer: 32 $^{\circ}$ F~176 $^{\circ}$ F (0 $^{\circ}$ C~80 $^{\circ}$ C)
Humidity	Up to 99% RH, non-condensing

## PHYSICAL SPECIFICATIONS

Transmitter	PC/ABS, IP65.
Transducer	Encapsulated design, IP68.
Transducer cable	Standard cable length: 30ft (9m).
Weight	Transmitter: approximately 0.7kg; Transducer: approximately 0.4kg



Transmitter



Transducer

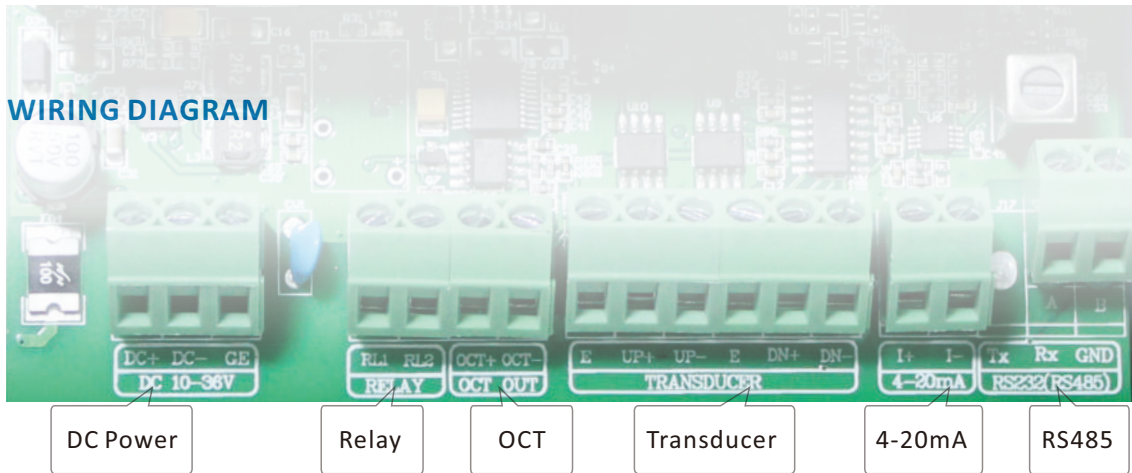


Pipe straps

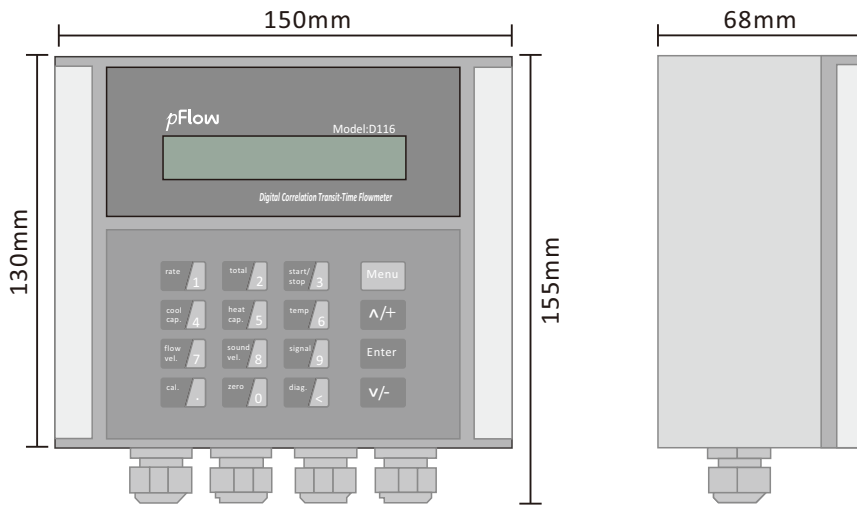


Coupling compound

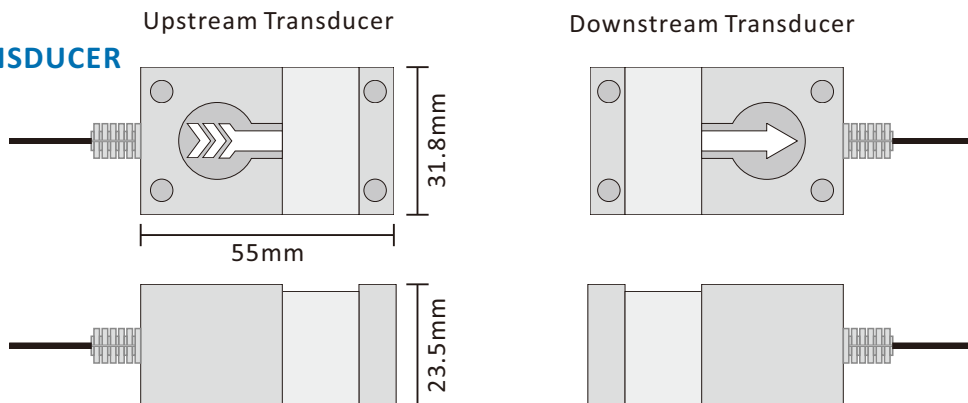
# ABOUT D116 INTERFACE AND SIZE



## TRANSMITTER DIMENSIONS



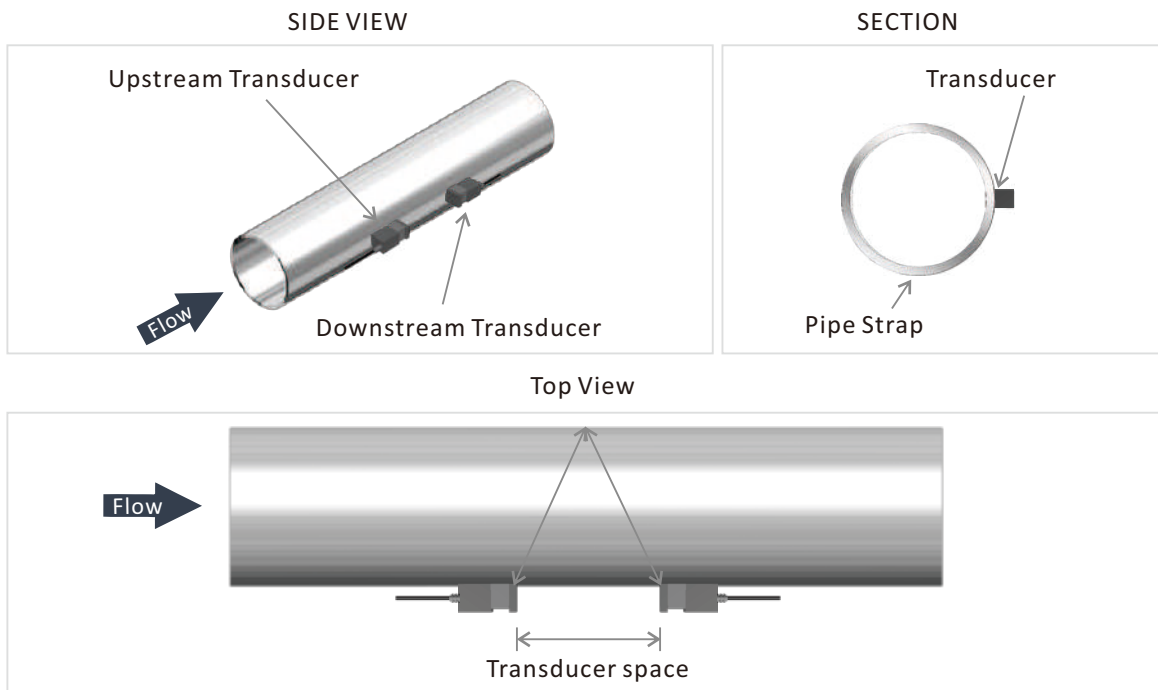
## TRANSDUCER



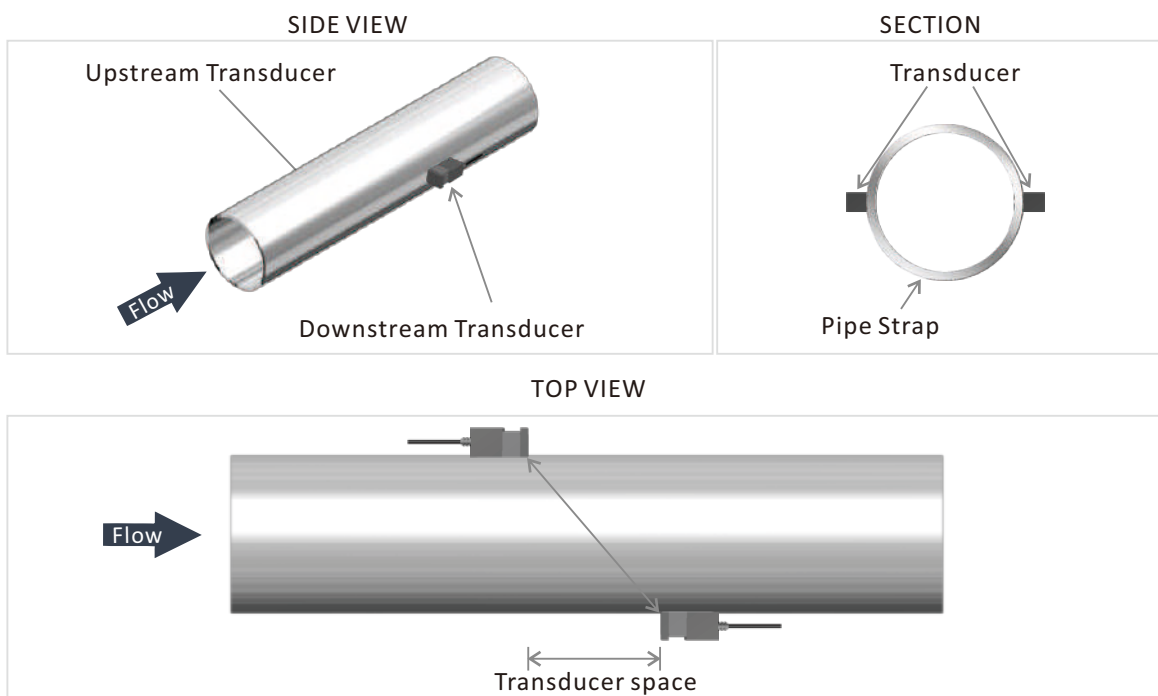
# ABOUT D116

## TRANSDUCER INSTALLATION METHODS

### V METHOD MEASURING PIPE SIZE : 25MM-400MM



### Z METHOD MEASURING PIPE SIZE: 100MM-3000MM





# ABOUT D116 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.

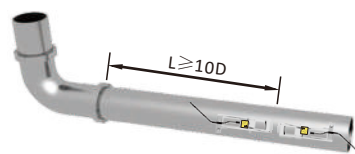
Ensure enough straight pipe length at least equal to the figure shown below for the upstream and downstream transducers installation.

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

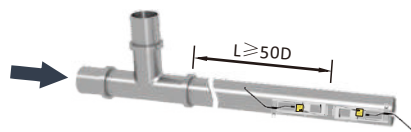
Consider the inside condition of the pipe carefully. If possible, select a section of pipe where the inside is free of excessive corrosion or scaling.

## STRAIGHT LENGTH OF UPSTREAM PIPING

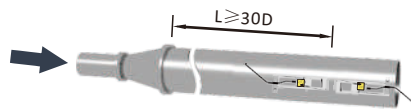
90° Bend



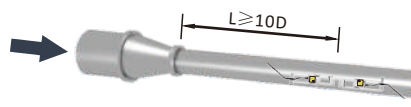
Tee



Diffuser



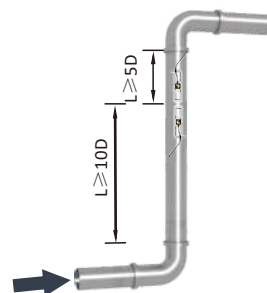
Reduce



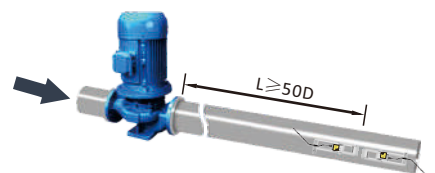
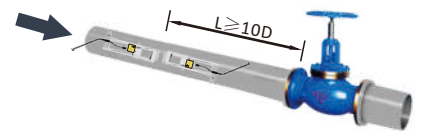
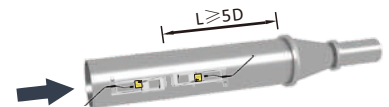
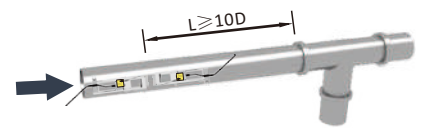
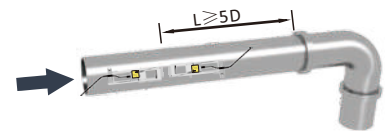
Valve



Vertical



## STRAIGHT LENGTH OF DOWNSTREAM PIPING



# ABOUT D116

## ORDERING INFORMATION

### MODEL

### DESCRIPTION

D116	<p>Digital Correlation Transit Time Flowmeter            Installation method: wall mount            Transmitter:            Flow Range: <math>\pm 0.03\text{ft/s} \sim \pm 16\text{ft/s}</math> (<math>\pm 0.01\text{m/s} \sim \pm 5\text{m/s}</math>)            Accuracy: <math>\pm 1.0\%</math> of measured value            Repeatability: 0.3%            Pipe Size Range: 1"~48" (25mm ~ 1200mm)            Keyboard: 16 (4x4) touch keys            Display: 20x2, alphanumeric, backlit LCD            Power supply: 10-36V DC@1A max            Transmitter enclosure: IP65, ABS/PC enclosure            Temperature: <math>-20^{\circ}\text{F} \sim 50^{\circ}\text{F}</math>            Output: OCT pulse output 0-10KHz, Relay output, 4-20mA optional            Communication: RS232, Modbus Protocol            Temperature: <math>-40^{\circ}\text{F} \sim +140^{\circ}\text{F}</math> (<math>-40^{\circ}\text{C} \sim 60^{\circ}\text{C}</math>)</p>
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### CODE

### OUTPUT

3	OCT output, Relay output, RS232, 4-20mA output
4	OCT output, Relay output, RS485, 4-20mA output
7	OCT output, Relay output, RS232, 4-20mA output, RTD input
8	OCT output, Relay output, RS485, 4-20mA output, RTD input

### CODE

### TRANSMITTER ENCLOSURE AREA CLASSIFICATION

CP037	Clamp on transducer, Operating temperature: $32^{\circ}\text{F} \sim +140^{\circ}\text{F}$ ( $0^{\circ}\text{C} \sim +60^{\circ}\text{C}$ )
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### CODE

### TRANSDUCER CABLE LENGTH

030	Standard 30ft (9m)
xxx	Maximum lengthen to 305m(1000ft), per 5m is a lengthen unit.

### CODE

### TYPE OF TEMPERATURE SENSOR

PT1000	Pt1000 Temperature sensor
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Standard Model: D116-4-CP037-030

Description: standard flowmeter with Clamp-on transducers, OCT pulse output, Relay output, RS485, 9m cable.

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