



# CLAMP ON ULTRASONIC FLOW METER



**Model No.  
UPC-USC-121**

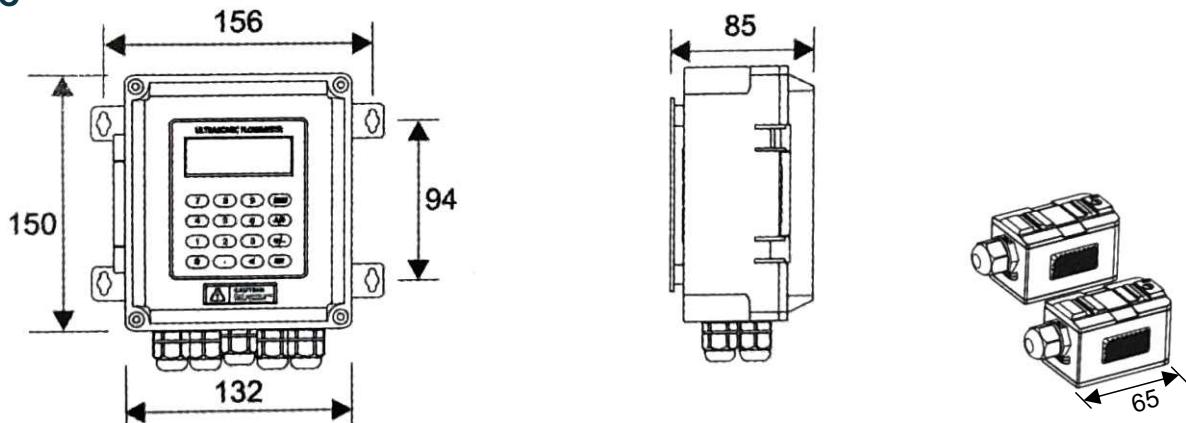
**HSN CODE: 90261010**

**UPC Instruments Pvt. Ltd.**

An ISO 9001:2015, 14001-2015 CE & TÜV SÜD Certified Company

# CLAMP ON ULTRASONIC FLOW METER "UPC-USC-121"

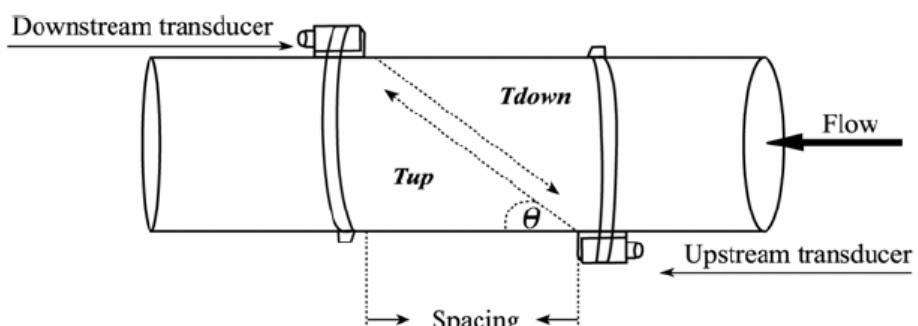
MAKE: "UPC"



"UPC-USC-121" Ultrasonic Flow Meter can be applied to a wide range of pipe for the flow measurement. Applicable liquids include pure liquids as well as liquid with small quantity of tiny particles. Examples are:

- Water (hot water, chilled water, city water, sea water, waste water, etc.)
- Sewage with small particle content.
- Oil (crude oil, Lubricating oil, diesel oil, fuel oil, etc.)
- Chemicals (alcohol, acids, etc.)
- Plant effluent
- Beverage, liquid food
- Ultra-pure liquids
- Solvents and other liquids

"UPC-USC-121" Ultrasonic Flow Meter has been manufactured with patent technologies and is equipped with more powerful functions and advanced performance. when the ultrasonic beam is transmitted through the flowing liquid, there will be a difference between the upstream and downstream transit time (travel time or time of flight), which is proportional to flow velocity, when fluid is flowing, counter flow transit time more is more than direct flow transit time.



$$V = \frac{MD}{\sin 2\theta} \times \frac{\Delta T}{T_{up} \cdot T_{down}}$$

## Remarks

where  $\theta$  : is the include angle to the flow direction  
 $M$  : is the travel times of the ultrasonic beam  
 $D$  : is the pipe diameter  
 $T_{up}$  : is the time for the beam from upstream transducer to the downstream one  
 $T_{down}$  : is the time for the beam from downstream transducer to the upstream one  
 $\Delta T$  :  $T_{up} - T_{down}$

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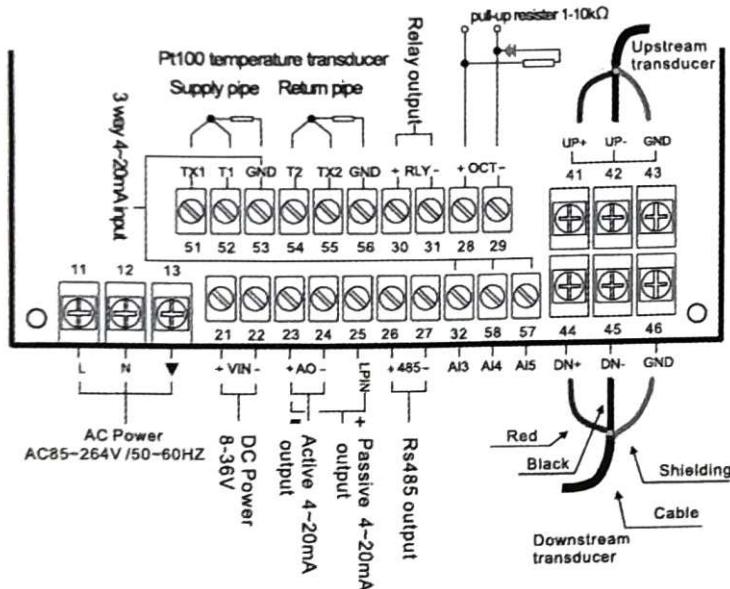
## Main Specifications

Measurement	: Transit-time measurement principle
Accuracy	: Better than $\pm 1.0\%$
Repeatability	: 0.2%
Measurement Period	: 0.5S
Display	: LCD with backlight. 2X20 letters.
Output	: One channel standard isolation RS485 output. One channel isolation 4-20mA or 0-20mA active output. One channel OCT Output One channel isolation relay output
Input	: Two channel three wire system PT100 platinum resistor input loop, to make heat meter has the function of displaying heat quantity Three channel 4-20mA input optional
Power	: AC 85-264V or isolation DC 8-36VDC
Power Consumption	: Less than 1.5W
Environment Temperature	: -30° C~80° C
Environment Humidity	: 85% RH
Protection Class	: IP 65
Clamp-On	: S2-Type: for pipe size $1/2''$ ~4"(DN15~DN100) M2-Type: for pipe size 2"~28"(DN50~DN700) L2-Type : for pipe size 11" ~ 240
Insertion wetted	: for more than DN80
Protection Class	: IP68, can work in water, water depth less than 10" (3m)
Temperature	: -20 degree to 90 degree
Pipe Material	: All metals, most plastics, fiber glass, etc.
Pipe Size	: DN15~DN6000
Pipe Straight run	: more than 10D for upstream, more than 5D for downstream, 30D if a pump is near upstream, where D is Pipe diameter

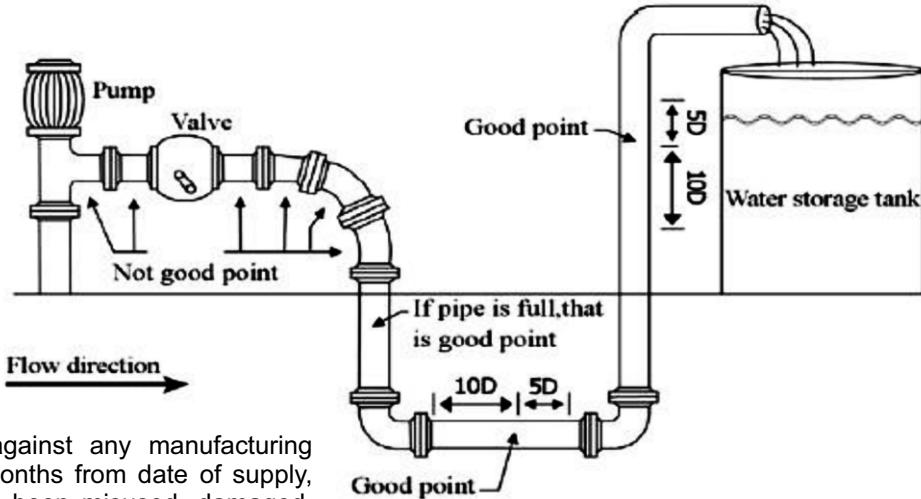
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Transducer	S2-type	M2-type	L2-type
Pipe size	DN15~DN100mm	DN50~DN700mm	DN300~6000mm
Temperature	0~160°C		
Size	45×30×30mm	60×45×45mm	80×70×55 mm
Quality	75g	250g	650g

## Wiring Diagram



## Installation drawing



## WARRANTY

All meter are warranted against any manufacturing defect for a period of 12 months from date of supply, provided the meter has not been misused, damaged, installed for services it is not recommended or the seal has been tampered with. The company shall be liable to furnish part/ parts thereof or full water meter as the company may deem fit.

**UPC INSTRUMENTS PVT.LTD.**  
AN ISO 9001:2015, 14001-2015 CE & TÜV SÜD CERTIFIED COMPANY

Office: Plot No. 18, Towel Market, Gohana Road, Panipat-132103 (HARYANA)

Manufacturing Unit: Plot no.125,Near Tehsil, Dinger Majra Road, Gharaunda, Karnal-132114 (HARYANA)

✉ : info@unitechmeter.com ✉ : ho@unitechmeter.com 🌐 : www.unitechmeter.com

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