

## Ultrasonic Flow Meter Model: MDUF102

### Applications

- Water treatment
- Pure water
- Chemical and etc
- Check system meters
- Midstream and down stream (pipelines and refineries)
- Energy sector (e.g. HVAC, geothermal, power plants)

### Special features

- Easy to install, reduced installation time and cost
- No pressure head loss, No moving parts to maintain or replace
- BTU function is an option. MDUF 102 could be used as an ultrasonic energy meter.
- Powerful data storage and also support the data sheet analysis software
- Support 1" to 48" and temperature -40 to 130°C

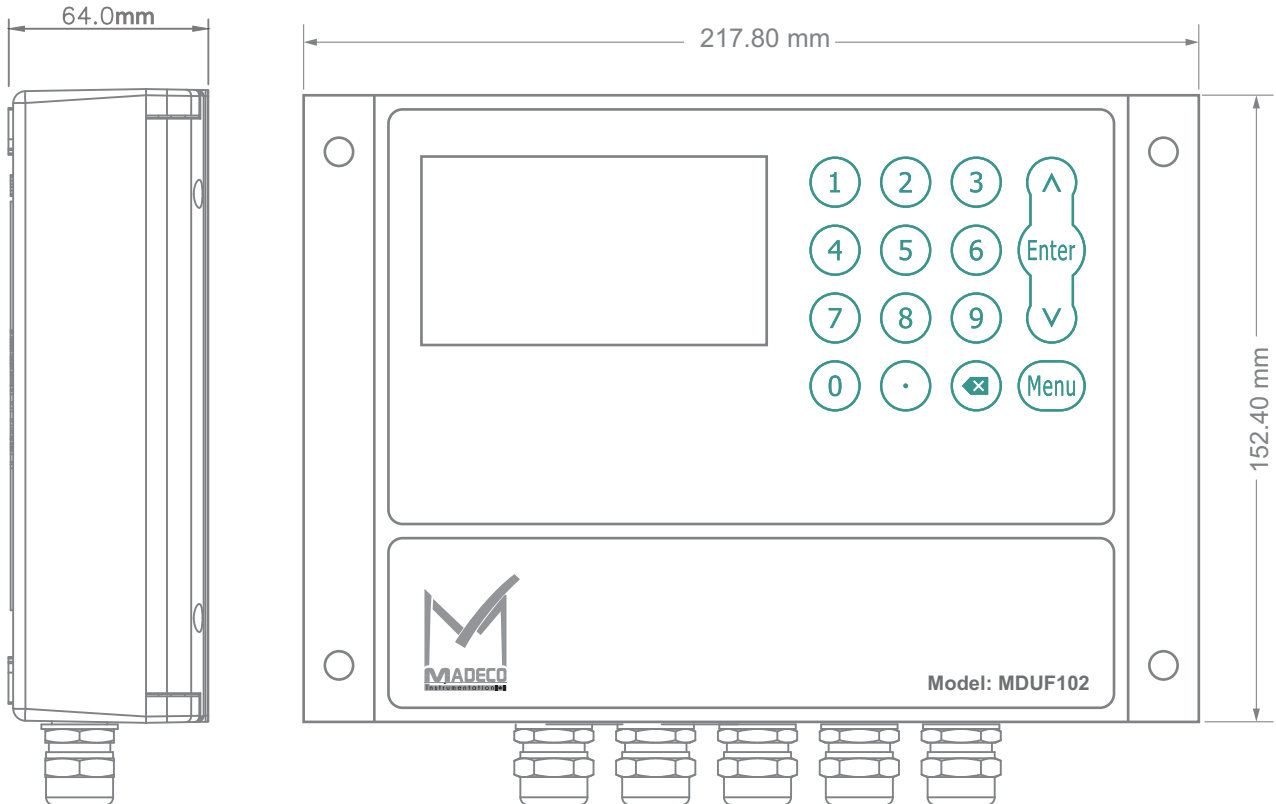
### Description

- |                    |   |
|--------------------|---|
| ■ Accuracy class   | 1% of measured value  |
| ■ Repeatability    | 0.2% of measured value  |
| ■ Flow range       | ±0.09 ft/d ~ ±16 ft/s (±0.03 m/s ~ ± 5m/s)  |
| ■ Transmitter      | PC/ABS, IP65  |
| ■ Fluid            | Water   |
| ■ Pipe material    | Carbon steel, stainless steel, PVC and other compact material pipe                                |
| ■ Outputs          | Analog output: 4~20mA, max load 750Ω.<br>Pulse output: 0~10KHz                                    |
| ■ SD card          | 16G   |
| ■ Interval         | 1~99999 seconds   |
| ■ Display          | 240*128 back light LCD  |
| ■ Humidity         | Up to 99% RH, non-condensing  |
| ■ Temperature      | Transmitter: -14°F~140°F (-20°C~60°C)<br>Transducer: -40°F~176°F (-40°C~80°C, standard)           |
| ■ Power supply     | 10~36VDC/1A   |
| ■ Transmitter      | PC/ABS, IP65  |
| ■ Transducer       | ABS, IP68/Double-shielded transducer cable<br>Standard/maximum cable length: 30ft/900ft (9m/274m) |
| ■ Transducer cable | Standard cable length: (16ft)   |



Product size

Transmitter size

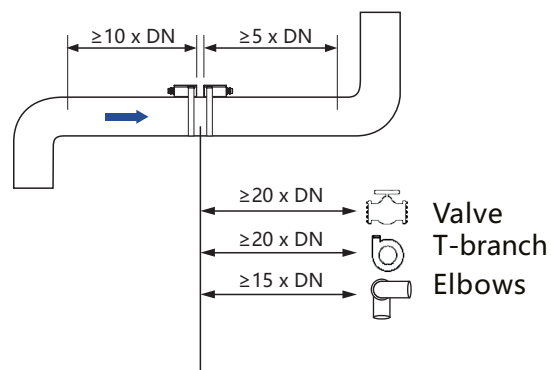


Transducer size



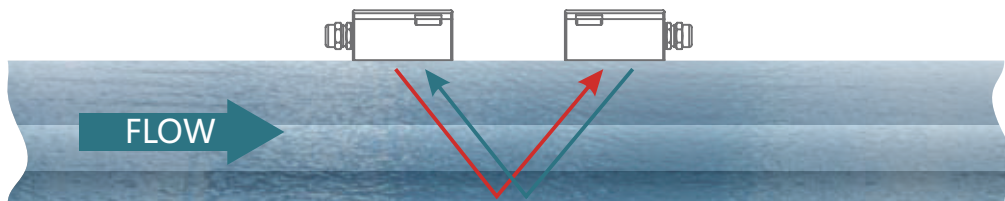
## Straight pipe demand

We suggest avoiding the valve, T-branch pipe and elbows if the condition allow. Please satisfied the hardest position installation requirements when you face more than one interfering resource.



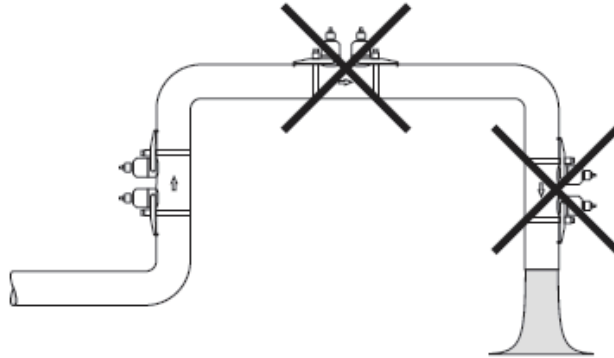
## Measuring principle

Transfer time technical means the ultrasonic signal from the transducer is transmitted and received through the moving liquid, there will can be used to calculate flow and velocity.

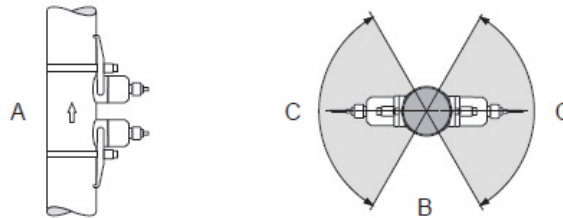


## Installation site selection

The first condition for ultrasonic flow meter is the pipe must be full of liquid, the bubbles will greatly influence the accuracy of the measurement, please avoid the follow installation position:



The suggestion installation area is as following :



- A is for upright pipeline, please notice the water direction is from the bottom to top.
- B is for horizontal pipeline, the transducers need to be installed inside the C area, angle for area C, max 120°.

## MDUF 102 Ultrasonic Flow Meter

ORDERING CODE	Example: MDUF 102	UL	1	AC	U	PS	C1	M	1	S	T	ST	Note
Type of Transmitter		UL											
UL - Ultrasonic flow meter		UL											
Flow Range			1										
1 - $\pm 0.09$ ft/d ~ $\pm 16$ ft/s ( $\pm 0.03$ m/s ~ $\pm 5$ m/s)			1										
Accuracy				AC									
AC - 1%				AC									
Out Put					U								
N - Not required only totalizer					U								
U - 4 ~ 20 mA. Frequency / pulse					U								
O - 4 ~ 20 mA. Frequency / pulse / RTD													
M - Modbus RS485								M					
C - Customer													
Pipe Size						PS							
PS - 1" ~ 48" (25mm ~ 1200mm)						PS							
Customer													
Type of Transducers							C1						
C1 - Clamp-on, Ip68 / (-40 ~ 80°C)							C1						
C1H - Clamp-on, Ip68 / (-40 ~ 130°C)													
I1 - Insertion, Ip68 / (-40 ~ 130°C)													
Digital Communication													
N - No Communication													
M - Modbus RS485								M					
H - Hart													
F - Foundation fieldbus													
P - Profidbas DP/PA													
Power Supply									1				
1 - 24 VDC									1				
2 - 220 VDC													
Transducers cable length											S		
S - Cable standard 9m											S		
C - Customer maximum length to 274m													
Temperature Sensor												T	
T - Pt1000 sensor 9m												T	
Options													
CC - Calibration certificate													
ST - SD card 16G												ST	
WA - One year warranty													
Other													





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