

Ultrasonic Flow Meter

Model: MDUF 101

Applications

- Oil industry
- 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
Without Cutting of the pipe
- No pressure head loss, No moving parts to maintain or replace
- BTU function is an option. MDUF 101 could be used as a ultrasonic energy meter.
- Powerful data storage and also support the data sheet analysis software
- Support 1" to 200" and temperature -40 to 180°C
- Unique calculation software with high accuracy
- Rate of sampling is greater than 300 times/s

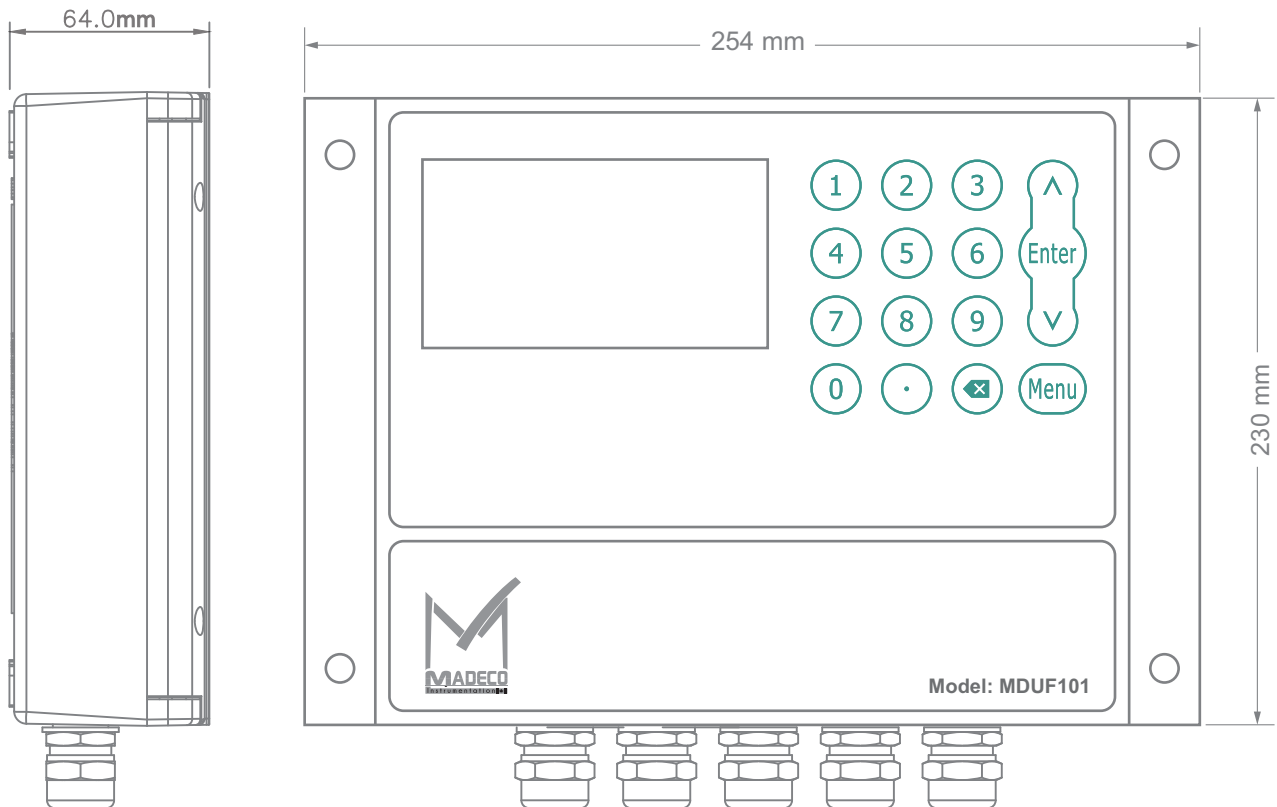
Description

- **Accuracy class** 0.5% of measured value
- **Repeatability** 0.15% of measured value
- **Flow range** ± 0.09 ft/d ~ ± 40 ft/s (± 0.01 m/s ~ ± 12 m/s)
- **Transmitter** PC/ABS, IP65
- **Fluid** Liquids
- **Pipe material** Carbon steel, stainless steel, PVC and other compact material pipe
- **Outputs** Analog output: 4~20mA, max load 750 Ω .
Pulse output: 0~9999Hz, OCT
(min. and max. frequency is adjustable)
- **SD card** 16G
- **Interval** 1~99999 seconds
- **Display** 240*128 back light LCD
- **Humidity** Up to 99% RH, non-condensing
- **Temperature** Transmitter: -40°F ~ 140°F (-40°C ~ 60°C)
Transducer: -40°F ~ 176°F (-40°C ~ 80°C, standard)
- **Power supply** 90 ~ 245VAC, 48 ~ 63Hz or 10 ~ 36VDC
- **Transmitter** IP 65
- **Transducer** IP 68 / Double-shielded transducer cable
Standard/maximum cable length: 30ft/900ft (9m/274m)
- **Transducer cable** Standard cable length: (30ft)



Product size

Transmitter size

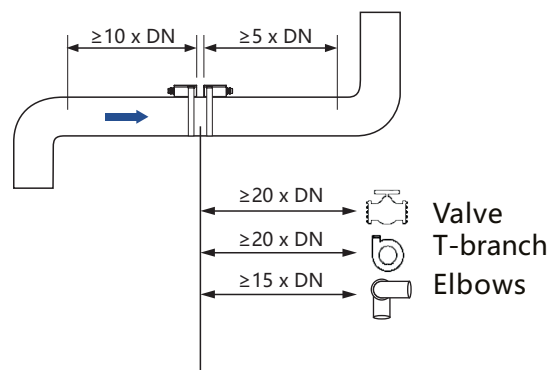


Transducer size



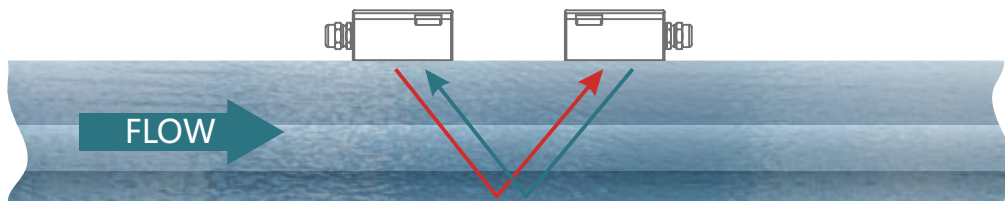
Straight pipe demand

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.



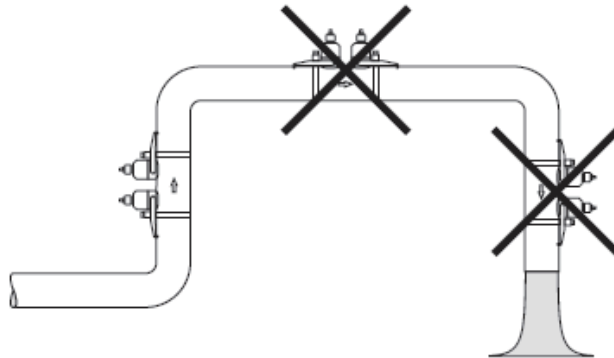
Measuring principle

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.

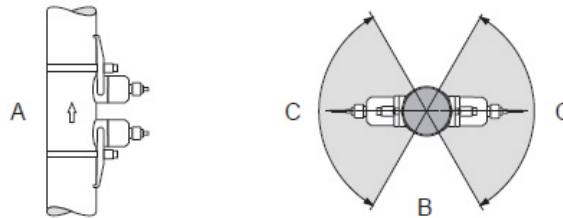


Installation site selection

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 101 Ultrasonic Flow Meter

| ORDERING CODE | Example: MDUF 101 | 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 - ±0.09 ft/d ~ ±40 ft/s (±0.01 m/s ~ ± 12m/s) | | | 1 | | | | | | | | | | |
| Accuracy | | | | AC | | | | | | | | | |
| AC - 0.5% | | | | 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" ~ 200" (25mm ~ 5000mm) | | | | | | PS | | | | | | | |
| Customer | | | | | | | | | | | | | |
| Type of Transducers | | | | | | | C1 | | | | | | |
| C1 - Clamp-on, Ip68 / (-40 ~ 80°C) | | | | | | | C1 | | | | | | |
| C1H - Clamp-on, Ip68 / (-40 ~ 130°C) | | | | | | | | | | | | | |
| C1M - Clamp-on, Ip68 / (0 ~ 180°C) | | | | | | | | | | | | | |
| I1 - Insertion, Ip68 / (-40 ~ 130°C) | | | | | | | | | | | | | |
| I1H - Insertion, Ip68 / (0 ~ 180°C) | | | | | | | | | | | | | |
| Digital Communication | | | | | | | | | | | | | |
| N - No Communication | | | | | | | | | | | | | |
| M - Modbus RS485 | | | | | | | | M | | | | | |
| H - Hart | | | | | | | | | | | | | |
| F - Foundation fieldbus | | | | | | | | | | | | | |
| P - Profibus 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 | | | | | | | | | | | | | |





Address: 7191 Yonge street, Toronto, Canada

Tel: +16472221281(5 line)

Web: www.madecotech.com

Email: Info@madecotech.com