MEGA MEASURING INSTRUMENT
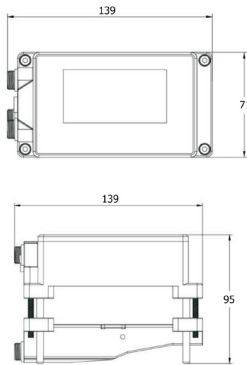
ULTRASONIC FLOW METER
FDT-30

Features

- Easily and friendly for installation and operation. It only takes a few minutes, from the start of installation to using the flow meter
- FDT-30 adopts a new external clamp design, which could get the flow rate without touch the measurement medium. Compared with other traditional flow meter, this could avoid pressure loss or media contamination problems.
- As the advantage of a clamp on flow meter, no need to cut off the pipe or long time stop the equipment, save the cost of time and labor costs.
- A variety of modes are available for setting and flexibility. One set is universal for all pipe size in the measuring range, and suitable for many kinds of metal and resin pipes.
- 256 x 128 LCD display. Display a variety of information.
- It is optional to become an ultrasonic cooling (heat) meter/ btu meter/ energy meter to realize the monitoring and measurement of energy.

Technical Data

Measuring principle : Ultrasonic flow meter
Flow rate range : *see table on page 2*
Units : m3, L, Gallon, Imperial Gallons, Million Gallons, cf, US barrel, Imperial barrel, Oil Barrel (user configured)
Flow Rate Units : All units /s or /min or /hr (user configured)
Energy unit (option) : GJ, Kilocalorie, MBtu, KJ, Btu, US Tonnes, US Tons, Kwh
Accuracy : ±1% of reading
Response Time : 0.5...60 seconds (user configured)
Pipe Size : DN15...40 mm (Inner Ø12...40 mm)
Temperature sensor (option): PT1000
Temperature range (option): 0...75ºC (No freezing on the surface)
Operating temperature : -10...60ºC (No freezing)
Operating humidity : 35...85 %RH (no condensation)
Totalizer : totals for positive, negative and net flow
Liquid Types : Most liquids including clean water, sea water, waste water, chemical liquids, oil, crude oil, alcohol, beer, and more
Particle Concentration : Clean liquids that have less than 3% by volume of particulate content
Pipe Material : All metals, most plastics such as carbon steel, cast iron stainless steel, PVC HDPE , Asbestos, etc.
Signal output : 4-20mA
Communication : Modbus RS485
Display: 256 x 128 LCD display
Power and output connection : M12 type aviation plug
Power and output cable length : 2 m
Temperature sensor cable length : 9 m
Power supply : 10...24Vdc
Power consumption : < 3W
Memory for data backup : EEPROM (Data storage: over 10 years, data read/write frequency: over 1 million times)
Housing material : Aluminum, ABS plastic
Dimensions : 139H x 71W x 20D mm
IP protection : IP65

Drawing

139

71

139

95

Unit : mm

Ordering code

FDT - 30 - ☐

- : Normal version
T : With temperature sensor (PT1000)

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Flow rate table

Nominal diameter		Flow range (L/min)
DN	**inch.**	
15	1/2"	0 - 60
20	3/4"	0 - 100
25	1"	0 - 200
32	1" 1/4	0 - 300
40	1" 1/2	0 - 400

**Note: The minimum measurable pipe size is the inner diameter ≥ 12mm

Tube types

The types of pipes that can be used with a portable flow meter are as follows:

Carbon steel tube

Stainless steel tube
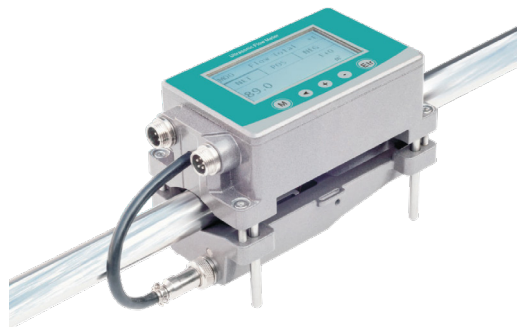

Cast iron tube

Copper tube

Aluminium tube

PVC tube

Asbestos tube

Fiber glass tube

www.omi.co.th

Omega Measuring Instrument Co., Ltd.
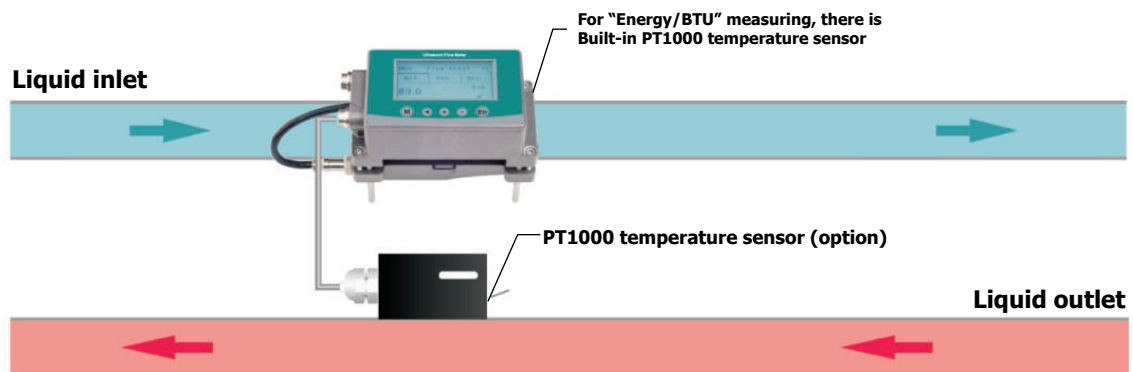Tel : 02-105-4676
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"Energy / BTU" measurement

For "Energy/BTU" measuring, there will be temperature sensor measuring a liquid inlet tube and liquid outlet pipe together. the device will calculate an energy from flow rate and different temperature.

For "Energy/BTU" measuring, there is Built-in PT1000 temperature sensor

Liquid inlet

PT1000 temperature sensor (option)

Liquid outlet

Standard Delivery scope :

1 x Ultrasonic flow meter
1 x Signal cable
1 x Power supply cable
1 x Screw
1 x Couplant gel

Signal Cable
Power Supply Cable
Ultrasonic Flow Meter
Screw
Couplant

For code "T" in ordering code :

1 x temperature sensor (PT1000)

PT1000 Temperature Sensor

Option :

UTG-100 : Ultrasonic Thickness Gauge Meter

CAL-FW-9001 : Calibration cerificate according with ISO 9001/9002

CAL-FW-17025 : Calibration cerificate according with ISO17025

G-FDT21 : Grease for Ultrasonic flow meter