T-measurement

TDS-100 Series
TRANSIT TIME ULTRASONIC FLOW METERS

DALIAN TAIJIA TECHNOLOGY CO.,LTD

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Application

◆ Water and waste water management;
◆ Water and waste water treatment plants;
◆ Power plants, such as nuclear power plants and hydraulic power plants;
◆ Mining and metallurgy plants;
◆ Petroleum process monitoring and control;
◆ Chemical process monitoring and control;
◆ Pulp and paper process monitoring and control;
◆ Food and beverage processing;
◆ Marine maintenance and operation;
◆ Energy supply and production systems;
◆ Flow measurement networking.

Liquid

◆ 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;

Pipe Material

◆ Carbon steel
◆ Stainless steel
◆ Cast iron
◆ Ductile iron
◆ Copper
◆ PVC
◆ Aluminum
◆ Asbestos

Easy to use , non-invasive
Accurate flow measurement
Outside the pipe

TDS-100H Hand Held Ultrasonic Flow Meter

TDS-100H is a completely non-invasive ultrasonic flowmeter using an ultrasonic signal to measure the flow rates with the transit time method. The unit has a built in datalogger for over 2000 lines of data and is optional for an external datalogger. TDS-100H has a pair of transducers capable of measuring flowrates in pipes from 15mm up to 6000mm at temperatures between 0℃ to 160℃.

TDS-100H

◆ Better than 1% accuracy
◆ 4×16 LCD display
◆ Clamp-on IP65 sensors
◆ RS232 output
◆ Pipe diameters from 15mm to 6000mm
◆ Ni-MH battery operation of over 12 h
◆ 90~230VAC power supply
◆ Internal data logger

T-measurement

TDS–100H
Hand Held Ultrasonic Flow Meter

| Technical parameters	HS-type	HM-type	S2-type	M2-type	L2-type
Pipe size (mm)	DN15~100	DN50~700	DN15~100	DN50~700	DN300~6000
Pipe size (inch)	(1/2~4")	(2~28")	(1/2~4")	(2~28")	(12~240")
Material	Aluminum alloy		Plastic alloy		
Frequency	1MHz				
Installation method	V (N/V)	V/Z	V(N/W)	V/Z	Z
Calibration	Calibrate with main unit				
Magnetism	Magnetic				
Temperature	32F~320F (0℃~160℃)				
Protection class	IP65				
Cable	Shielded transducer cable. Standard length 5m×2. Can be extended to 10m×2 or 15m×2				

No process interruption
No moving parts, no leakage
No risk of contamination and corrosion
Non−intrusive flow measurement

TDS−100F1 Wall Mount Ultrasonic Flow Meter

TDS-100F1 accurately captures flow measurements using three approaches: clamp-on, flow-cell and insertion. Automatically memory the positive, negative, net totaliser flow rate and heat quantity of the last 512 days, 128 months, 10 years.

- ◆ Better than 1% accuracy
- ◆ 0.2% of repeatability
- ◆ 2×20 LCD display
- ◆ 4×4 key tactile-feedback membrane keypad
- ◆ 85~264VAC or 24VDC power supply
- ◆ Pipe diameters from 15mm to 6000mm
- ◆ RS485 output
- ◆ Operate with clamp-on, insertion and flow-cell transducer
- ◆ One channel programmable 4-20mA output
- ◆ Two channel programmable digital out (isolated OCT and Relay)
- ◆ Frequency output
- ◆ IP65
- ◆ SD USB data memory (1G, 4G ,8G etc)
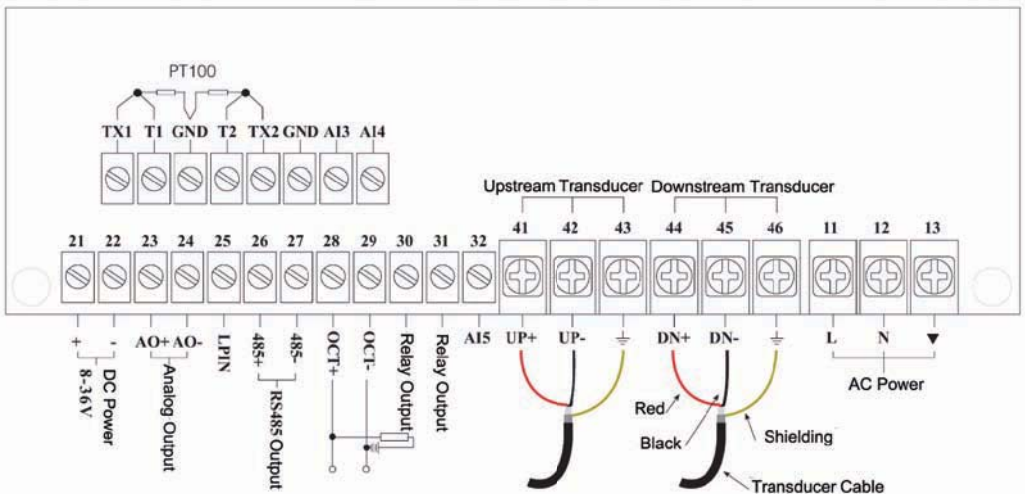
TDS–100 Series

TRANSIT TIME ULTRASONIC FLOW METERS

Low Cost
Clamp–On Transducer
Economical

TDS–100M Ultrasonic Flow Module

The TDS-100M modular ultrasonic flow meter can work alone without a LCD and Keypad module. The module can be used alone as a flow meter. Users can even integrate a number of the modules into a multi-channel flow meter that can measure up to several dozen of different pipes or a flow meter that has higher accuracy by measuring the same pipe with all the channels. The design of the meter is intended to provide for users like system integrators and OEM users with a lowest cost but of high performance flow meter.

◆ 8-36VDC
◆ 1x MODBUS RS485 ,4-20mA and OCT output
◆ 4-20mA and PT100 platinum resistance input
◆ 2×20 English letters LCD display
◆ 4 key tactile-feedback membrane keypad
◆ IP57
◆ Operate with clamp-on, insertion and flow-cell transducer
◆ Pipe diameters from 15mm to 6000mm
◆ GPRS / GSM networking capability with certain model

Clamp−On Transducer

A pair of clamp-on transducers measure the flow from outside of a pipe.There is no pressure drop, no leaks and no contamination. The installation is very simple and no special skills or tools are required.

Technical parameters	S2-type	M2-type	L2-type
Pipe size (mm)	DN15~100	DN50~700	DN300~6000
Pipe size (inch)	(1/2~4")	(2~28")	(12~240")
Material	Plastic alloy		
Frequency	1MHz		
Installation method	V(N/W)	V/Z	Z
Calibration	Calibrate with main unit		
Magnetism	Magnetic		
Temperature	32F~320F (0℃~160℃)		
Protection class	IP65		
Cable	Standard length 5m×2. Can be extended to 10m×2 or 15m×2		

Insertion Transducer

A pair of insertion-type transducers are inserted into the pipe wall to interrogate the flow in the pipe. Since the transducers do not extrude into the flow, they do not generate any disturbance or cause any pressure drop. There is no moving parts to wear out.

If the pipe material is carbon steel or stainless steel, it can be installed directly by welding. But if the pipe material is cast iron, FRP, PVC or cement, please contact with the manufacturer to order the dedicated pipe hoop. To prevent leak water, please give the exact outside diameter or perimeter to the manufacturer.

Technical parameters	B-type	B Long-type
Pipe size	More than DN80mm	
Material	Ball valve and transducer pole's material: stainless steel, Valve base's material is carbon steel (stainless steel is optional)	
Frequency	1MHZ	
Pipe material	All metals, most plastics, fiber glass,etc.	
Installation method	Z method	
Application of temperature	-40℃-160℃	
Bore size	Φ19mm (please use the manufacture's dedicated tools to drill, it can install with pressure.)	
Pressure class	1.6MPa(less than 0.8MPa when installing)	
Protection class	IP68 (can work in water and water depth ≤ 3 meter)	
Mounting Space	More than 550mm between the well wall and the pipe wall	More than 700mm between the well wall and the pipe wall
Length	186mm	330mm

TM–8812 Ultrasonic Thickness Gauge

- ◆ Make accurate pipe wall measurements
- ◆ 0.2 mm accuracy
- ◆ Wall sound speed
- ◆ Ideal for use with Clamp-On flow meters

Complementary Products : Fixed/ Hand held flow meters

TM–8812
Ultrasonic Thickness Gauge
with wall sound speed feature

- ◆ Allows accurate wall thickness entry
  for best results with clamp−on flow meters.

- ◆ Quick and easy setup and calibration.

Measurement Range:- 1.5~200mm 0.06~8inch
Materials:- 11 Types
Calibration Block:- Included
Power Supply:- 4x AAA batteries

Sensor Type:- Ultrasonic
Velocity Range:- 500~9000 m/s
Accuracy:- ±(0.5%n+0.2)
Dimensions:- 120x60x29mm