WALL MOUNT ULTRASONIC FLOW METER
For Clean Liquids

FDT-21W

1 YEAR WARRANTY CE

✔ **Accuracy 1%**
✔ **Repeatability 0.2%**
✔ **Positive, Negative and Net Totalizer**
✔ **2-Line LCD Display**
✔ **Clamp On Transducers**
✔ **RS485 Output**
✔ **4 to 20 mA Output**

FDT-21W ultrasonic flow meter is designed to measure the fluid velocity of liquid in a full/closed pipe. It is a measurement system which is both easy to install and use. The FDT-21W operates according to the difference in the transit time of flight measured, and determines the flow velocity by measuring the travel time of a pulse from one transducer to the next. Flow in the same direction takes less time to travel to the second transducer than does flow in the opposite direction. Electroacoustic transducers receive and emit brief ultrasonic pulses through the liquid of the pipe. Transducers are vertically placed at both sides of the measured pipe. Sensors are placed on the pipe and fastened by means of a clamp. The display will quickly show the flow velocity. The FDT-21W can be used for metallic, plastic and rubber tubes.

FDT-21W shown smaller than actual size.

FDT-21W inside view.

SPECIFICATIONS
Accuracy: ±1% of reading >(0.2 m/s) 0.6 ft/s
Repeatability: 0.2%
Linearity: 0.5%
Response Time: 0 to 999 seconds (user configured)
Velocity: (±0.01 to 30 m/s) ±0.03 to 105 ft/s bi-directional
Temperature Range:
   Standard with High Temperature Transducers:
   0 to 160ºC (32 to 320ºF)
Pipe Size: DN 20 to 100 mm (0.75 to 4") standard [up to DN 6000 mm (236") with optional transducers]
Transducer Frequency: 1 MHz
Rate Units (User Configured):
Meter, feet, cubic meter, cubic feet, USA gallon, oil barrel, USA liquid barrel, imperial liquid barrel, million USA gallons
Totalizer: 7-digit 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
Suspension Concentration: ≤20,000 ppm (may contain very small amounts of air bubbles)
Pipe Material: All metals, most plastics and fiberglass
Security: Programmable lock-out code
Display: 2 x 16 english letters
Power: 85 to 264 Vac
Communications: RS485 (baud rate from 75 to 115,200 bps)
Output: 4 to 20 mA
Transducer Cable Length: 5 m (15')
Data Logger: Built-in, stores over 2000 lines of data
Totalizer/Calibration: 7-digit press-to-go for calibration
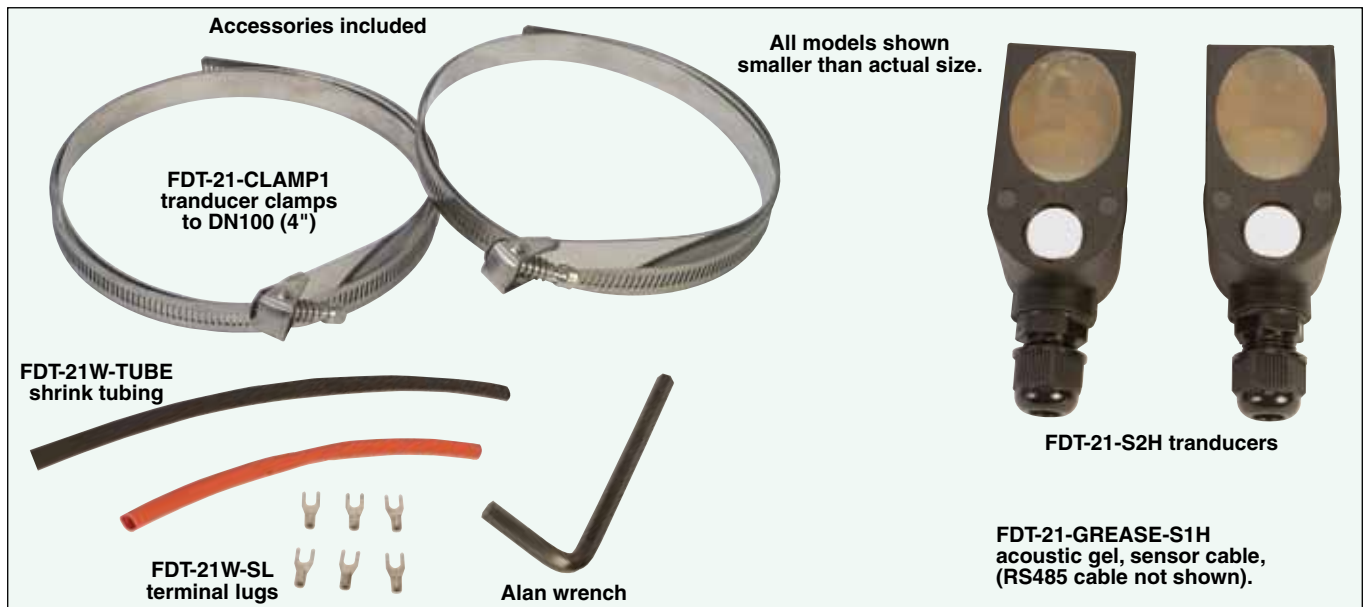**Housing:** ABS plastic with aluminum alloy protective carrying case
Case: NEMA 4 (IP65)
Dimensions: 29 H x 20 W x 9 cm D (11.5 x 8 x 3.5")
Weight: 514 g (1.2 lb)

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Accessories included

All models shown smaller than actual size.

FDT-21-CLAMP1
tranducer clamps
to DN100 (4")

FDT-21W-TUBE
shrink tubing

FDT-21W-SL
terminal lugs

Alan wrench

FDT-21-S2H tranducers

FDT-21-GREASE-S1H
acoustic gel, sensor cable,
(RS485 cable not shown).

Parameters	S2-Type	M2-Type	L2-Type
Pipe Size (mm)	20 to 100DN	50 to 700DN	300 to 6000DN
Pipe Size (inch)	¾ to 4	2 to 28	12 to 240
Material	ABS		
Frequency	1 MHz		
Calibration	Calibrated with the main unit		
Magnetism	Magnetic		Non-magnetic
Temperature	0 to 160°C (32 to 320°F)		
Protection Class	NEMA 4 (IP65)		
Dimensions mm (inch)	45 x 30 x 30 (1.8 x 1.2 x 1.2)	60 x 45 x 45 (2.4 x 1.8. x 1.8)	80 x 70 x 55 (3.1 x 2.8 x 2.2)
Weight g (oz)	75 (2.6)	250 (8.8)	650 (23)
Liquid Types	Fresh water, salt water, chemical liquids, oil, crude oil, alcohol, beer, etc.		
Suspension Concentration	≤20,000 ppm, may contain very small amount of air bubbles		
Pipe Material	All metals, most plastics, fiberglass, etc.		
Dedicated Shielded Transducer Cable	Standard length 5 meter x 2, can be extended to 10 meter x 2 or 15 meter x 2		

To Order

Model No.	Description
FDT-21W	Wall mount transit-time ultrasonic flow meter (includes S2H transducers)

Comes complete with standard high temperature transducers (S2H), acoustic gel, tape measure, RS485 cable, transducer cable, tranducer clamps, alan wrench, terminal lugs, shrink tubing and operator's manual.

Accessories

Model No.	Description	Weight g (oz)	Pipe Size mm (inch)
FDT-21-S2H	Replacement small pipe standard transducer	75 (2.6)	20 to 100 (0.75 to 4)
FDT-21-M2H	Medium pipe standard transducer	250 (8.8)	50 to 700 (2 to 28)
FDT-21-L2H	Large pipe standard transducer	650 (23)	300 to 6000 (12 to 236)
FDT-21-CLAMP1	Replacement pipe clamp set for up to DN100 (4")		
FDT-21-CLAMP2	Replacement pipe clamp set for up to DN200 (8")		
FDT-21-CLAMP3	Replacement pipe clamp set for up to DN300 (12")		
FDT-21-CLAMP4	Replacement pipe clamp set for up to DN400 (16")		
FDT-21-CLAMP5	Replacement pipe clamp set for up to DN500 (20")		
FDT-21-CLAMP6	Replacement pipe clamp set for up to DN600 (24")		
FDT-21-GREASE-S1	Replacement acoustic gel for standard transducers		
FDT-21-GREASE-S1H	Replacement acoustic gel for high-temperature transducers		

***Ordering Example: FDT-21W,** wall mount transit-time ultrasonic flow meter.*