

**Dynasonics**<sup>®</sup>

Hand-Held Battery-Powered  
Flow Meter



 **Badger Meter**

**UFX Ultrasonic Doppler**

## Hand-Held Doppler Flow Meter

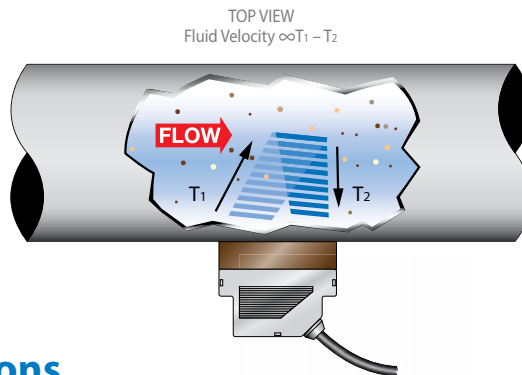
The Series UFX Doppler Flow Meter features an advanced ultrasonic measuring technology, providing accurate and reliable flow velocity assessments.

The Series UFX flow meter is a cost-effective flow measurement system for closed full pipes size 1/4 in. (6 mm) and above.

- Non-invasive, hand-held transducer and battery-powered electronics packaged in a NEMA 4 (IP65) rated enclosure
- Measures fluid velocities from 0.3...30 FPS (0.1...9 MPS)
- Reliable readings on nearly all liquid applications containing a minimum of 100 ppm of 100 micron size suspended solids or entrained gases
- Optional CE approved version for pipes size 1 in. (25 mm) and above
- Large four-digit LCD display provides velocity readout in user selected units (FPS or MPS)
- Easy to use flow verification instrument for industrial and municipal applications including paper pulp stock, concrete slurries, dredging, primary sludge and waste activated sludge

## Principle of Operation

The Series UFX utilizes two piezoelectric crystals contained within one transducer to transmit ultrasonic energy into the fluid stream and receive reflected energy off discontinuities, suspended particles or entrained gases, within the moving liquid. When the fluid is flowing in the pipe (with the discontinuities traveling at the same speed), there will be an apparent shift in frequency from the transmitted sound wave to the received sound wave. The difference between these sound wave frequencies is the Doppler frequency shift and is proportional to fluid velocity. In addition to measuring and displaying fluid velocity, the UFX processor also controls all operations of the instrument from its ultra-efficient battery management circuitry to a proprietary FIR (Finite Impulse Response) filtration program.

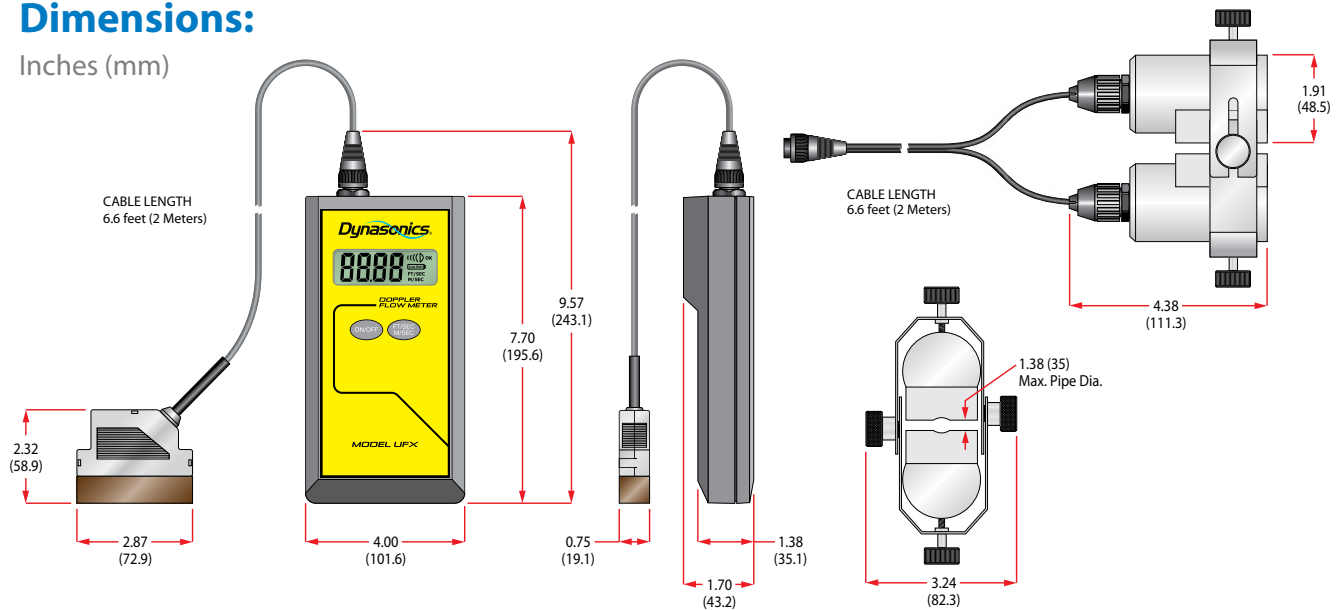


## Specifications

Liquid Requirements	100 ppm of 100 micron size suspended solids or entrained gases
Pipe Sizes	Std. 1" (25 mm) and greater Small pipe 1/4"...1" (6...25 mm)
Flow Range	0.3...30 fps (0.1...9 mps)
Accuracy	±2% of full scale
Display	Single line – four digit LCD readout of velocity, signal strength, measuring units, and low battery indication
Enclosure – Rating Dimensions:	NEMA 4(IP65) ABS plastic; 1.5 lbs. (0.7 kg) 4" W x 7.7" H x 1.7" D (101.6 mm x 195.6 mm x 43.2 mm)
Transducer Material	Plated body; Ultem® 1000 sensor material
Ambient Temperature	–28° F... 140° F (–20° C...60° C)
Liquid Temperature	–40° F... 180° F (–40° C...82° C)
Humidity	0...95% non-condensing
Supply Voltage	Battery powered; non-rechargeable alkaline, four AA cells; providing greater than 30 hours of continuous operation
Cable	6.6 feet (2 m) cable and connector
Mounting Method	Hand-held with acoustic couplant compound

## Dimensions:

Inches (mm)



## Part Number Construction

DUFX1



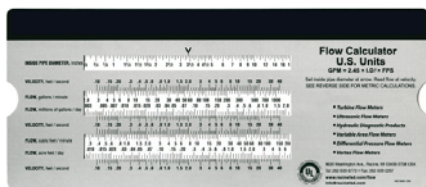
Transducer Type

- B1)** Small Pipe, 1/4" ... 1" (6...20 mm)
- D1)** Std. Pipe, 1" (25 mm) and greater
- F1)** Both B1 and D1

Approvals

- CE)** CE Generic Light Industrial\*  
(Leave blank if no approvals are required)
- \*CE available with Std. Pipe Transducer only.

**Note:** Unit includes carrying case, one tube silicone couplant (for temporary mounting), and four AA batteries



Velocity to Volumetric  
Flow Calculator included



## Spare Parts and Accessories

Nylon Mounting Strap 30" (750 mm)	D002-2007-002
Couplant, Silicone (for temporary mounting)	D002-2011-001
SS Identification Tag	D001117
Series DUFX Standard Pipe Transducer	DTUFX-D1
Series DUFX Small Pipe Transducer	DTUFX-B1
Series DUFX Operations Manual	DUFX O&M
UFX Carrying Case	D003-1009-005

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06-DPP-BR-00402-EN (August, 2012)