Badger Meter Europa

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Model UFX

Handheld Doppler flow meter

Features

- Non-invasive, handheld sensor and battery-powered electronics packaged in a NEMA 4 (IP65) rated enclosure
- Measures fluid velocities from 0,1 to 9 m/s (0.3 to 30 ft/s)
- 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 DN 25 (1") and above
- Large four-digit LCD display provides velocity readout in user selected units (m/s or ft/s)
- Easy to use flow verification instrument for industrial and municipal applications including paper pulp stock, concrete slurries, dredging, primary sludge and waste activated sludge

Description

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 pipe sizes from DN 6 to DN 3000 (1/4 " to 120").

Applications

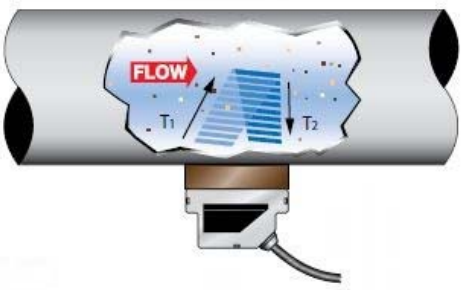
Portable flow measurements on liquids containing a minimum of 100 ppm* of 100 micron size suspended solids or aeration in closed full pipes.

*Parts per million

Measuring principle

The series UFX utilizes two piezoelectric crystals contained within one sensor 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.

Top view
Fluid velocity ∞ T1 - T2

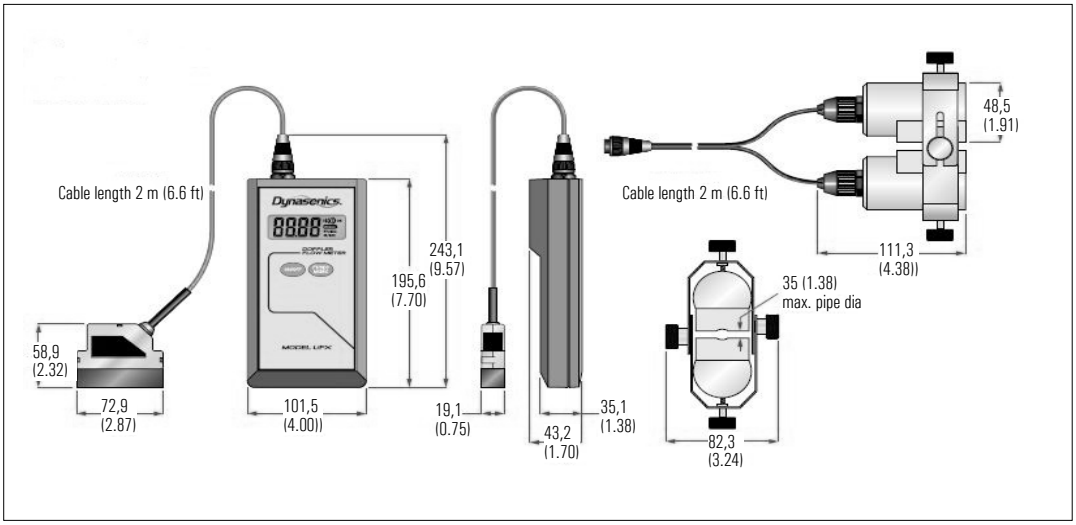


Technical data

Liquid requirements	100 ppm* of 100 micron size suspended solids or entrained gases
Pipe sizes	DN 6 - DN 25 (1/4" to 1") DN 25 to DN 3000 (1" to 120")
Flow range	0,1 to 9 m/s (0.3 to 30 ft/s)
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; 0,7 kg (1.5 lbs) 101,6 mm W x 195,6 mm H x 43,2 mm D (4" W x 7.7" H x 1.7" D)
Sensor material	Plated body; Ultem® 1000 sensor material
Ambient temperature	– 20 °C to +60 °C (–28 °F to +140 °F)
Liquid temperature	– 40 °C to +80 °C (–40 °F to +180 °F)
Humidity	0 to 95 % non-condensing
Power supply	Battery powered; non-rechargeable alkaline, four AA cells; providing greater than 30 hours of continuous operation
Cable	2 m (6.6 ft) cable and connector
Mounting method	Handheld with acoustic couplant compound
Approvals	CE Generic Light Industrial (with std. pipe sensor only), optional

* Parts per million

Dimensions in mm (inches)



Ordering matrix

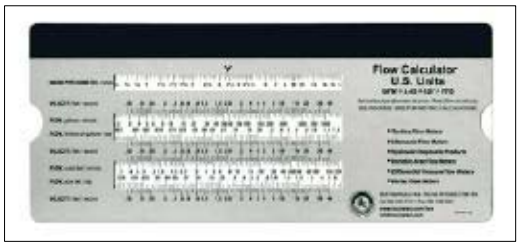
DUFX1	☐	☐	–	☐	☐

Sensor type
B1) Small pipe, DN 6 to DN 25 (1/4" to1")
D1) Std. pipe, DN 25 - DN 3000 (1"to 120 ")
F1) Both B1 and D1

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

Approvals
CE) CE Generic Light Industrial*
(Leave blank if no approvals are required)
*CE available with std. pipe sensor only.

Flow calculator



Velocity to volumetric flow calculation included

Spare parts and accessories

Part number	U.S. part number	Description
480019	D002-2007-002	Nylon mounting strap 750 mm (30")
480001	D002-2011-001	Couplant, silicone (for temporary mounting)
480020	D001117	SS Identification tag
280040	DTUFX-D1	Series DUFX standard pipe sensor
280041	DTUFX-B1	Series DUFX small pipe sensor
480021	D003-1009-005	UFX carrying case