

# ULTRASONIC FLOWMETER SET

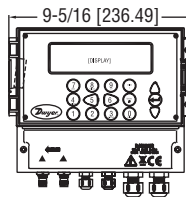
Non-Invasive Pipe Flow Measurement, Easy Operation and Data Logging Option



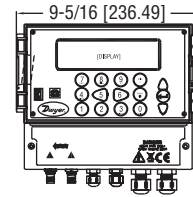
UFB



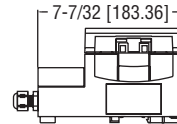
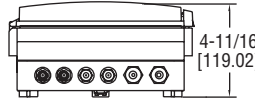
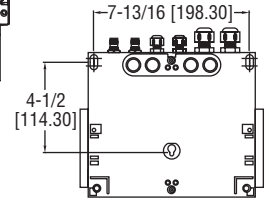
UFC



UFB



UFC



The **SERIES UFB & UFC** Ultrasonic Flowmeter Sets utilize the transit-time difference for measuring flow rates in pipes. These units are permanent mount, where the converters can be mounted on a surface or pipe with a 4 to 20 mA and pulse output capabilities for pipe sizes from 1/2 to 79" (13 to 2000 mm). The Series UFC offers the same features plus data logging capability.

**FEATURES/BENEFITS**

- Non-invasive pipe measurement
- Easy-to-use compact and lightweight design, intended for homogeneous liquids that contain no air
- Simple installation with all necessary components included such as converter, sensor, cables and mounting accessories
- Sturdy IP65 rating, protecting it from dust and direct water contact

**APPLICATIONS**

- Water treatment
- Industrial systems
- Irrigation applications
- Treated water flow
- River water
- Sea water
- Potable water
- Demineralized water
- Glycol/Water mix
- Hydraulic system
- Diesel oil
- Water use data logging

**KIT INCLUDES**

- Converter
- Set of transducers
- Ruled guide rail
- Steel banding
- Banding clips
- Set of transducer cables
- Set of high temperature interface cables
- Ultrasonic coupling grease

MODEL CHART - STANDARD VERSION		
Model	Pipe Size Range in (mm)	Power Supply
UFB-122	0.5 to 4.5 (13 to 115)	86 to 264 VAC
UFB-123	2 to 79 (50 to 2000)	86 to 264 VAC
UFB-222	0.5 to 4.5 (13 to 115)	24 VAC/VDC
UFB-223	2 to 79 (50 to 2000)	24 VAC/VDC

MODEL CHART - DATA LOGGING VERSION		
Model	Pipe Size Range in (mm)	Power Supply
UFC-122	0.5 to 4.5 (13 to 115)	86 to 264 VAC
UFC-123	2 to 79 (50 to 2000)	86 to 264 VAC
UFC-222	0.5 to 4.5 (13 to 115)	24 VDC/VAC
UFC-223	2 to 79 (50 to 2000)	24 VDC/VAC

**SPECIFICATIONS**

**Service:** Homogeneous liquids that do not contain more than 3% of air bubbles or particulate and capable of ultrasonic wave propagation.  
**Inputs:** TNC cable from sensors.  
**Range:** 0.33 to 33 ft/s (0.1 to 10 m/s).  
**Display:** 240 x 64 pixel graphic display, high contrast black on white with backlight; Languages: English, French, German, Swedish, Italian, Spanish, Portuguese, Russian, Norwegian, and Dutch; 5" W x 1.3" H (5 x 33.02 mm).  
**Accuracy:** ±0.5 to ±2% of flow reading of flow rate > 0.03 ft/s (0.01 m/s) and pipe OD > 3.0 in (75 mm); ±3% of flow reading for flow rate > 0.03 ft/s (0.01 m/s) and pipe OD 0.5 to 3 in (13 to 75 mm); ±6% of flow reading for flow rate < 0.03 ft/s (0.01 m/s).  
**Power Requirements:** 86 to 264 VAC (50 to 60 Hz) or 24 VAC/VDC (1 A max).  
**Power Consumption:** 10.5 W.  
**Temperature Limits:** Transducer: -4 to 275°F (-20 to 135°C); Controller: -4 to 122°F (-20 to 50°C).  
**Outputs:** Analog 1 opto-isolated output: 4 to 20 mA, 0 to 16 mA or 0 to 20 mA (selectable); Error current: 0 to 26 mA (selectable); Load resistance: 620 Ω max; Alarm: 2 opto-isolated MOSFET NO relays, 48 V at 500 mA, maximum 200 Hz; Pulsed: 1 opto-isolated MOSFET relay, 48 V at 500 mA, 1 to 250 pps; Pulse width: 2 to 500 ms (selectable).  
**Serial Communications:** USB (UFC only).  
**Enclosure Rating:** IP65 when using TNC connector; Transducers IP54.  
**Materials:** Plastic ABS and aluminum.  
**Repeatability:** ±0.5 % of measured value or 0.03 ft/s (0.01 m/s).  
**Electrical Connections:** Removable screw-in type terminal block.  
**Mounting:** Wall mounted using 3 type M4 screws.  
**Turbidity:** < 3 % by volume of particulate content.  
**Permissible Air Content:** < 3% by volume.  
**Response Time:** < 500 ms.  
**Weight:** Unit not including accessories: 2.80 lb (1.26 kg); Unit including accessories: 9.92 lb (4.5 kg).  
**Agency Approvals:** CE.

**ADDITIONAL SPECIFICATIONS**

**Applicable Pipe Material:** Carbon steel, SS, copper, UPVC/PVDF, concrete, mild steel, glass, brass.  
**Applicable Pipe Lining:** Rubber, glass, concrete, epoxy, steel, other\*.  
**Pipe Wall Thickness:** 0.04 to 3" (1 to 75 mm).  
**Pipe Lining Thickness:** < 1" (< 25 mm).  
 \*Selectable option for special material with known propagation rate of lining material.

OPTION	
Use order code:	Description
NISTCAL-FU	NIST traceable calibration certificate