

BFU-100F

Ultrasonic Flow Meter

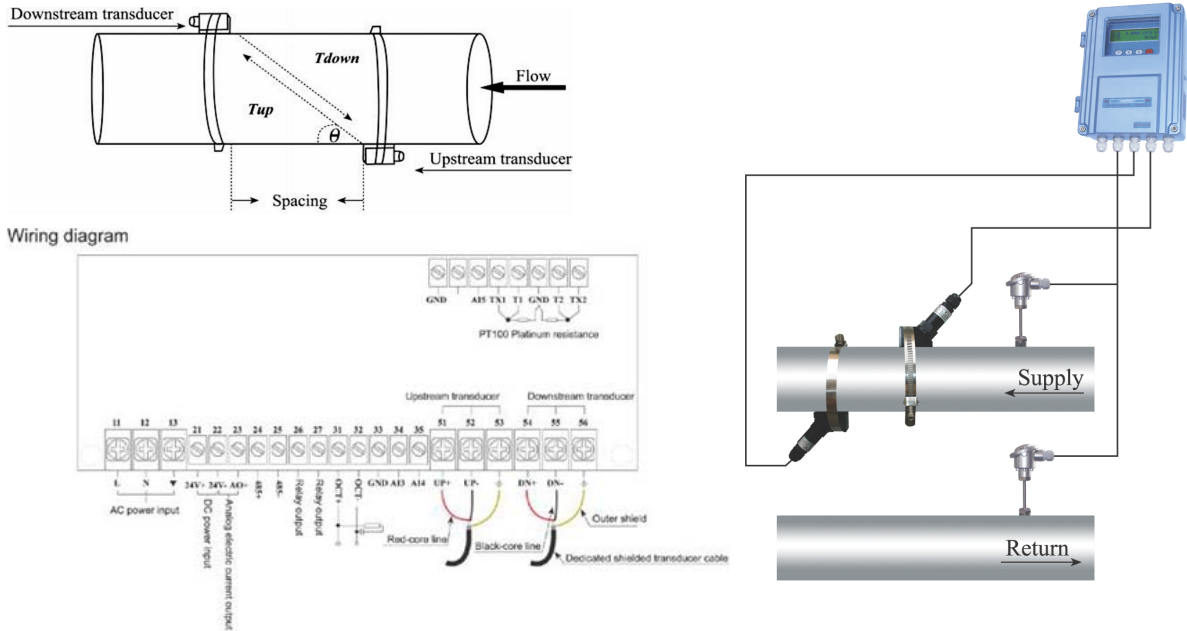


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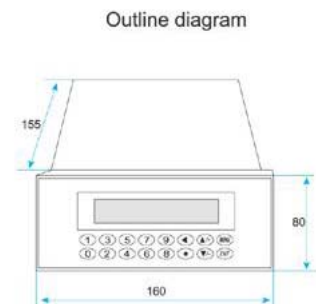
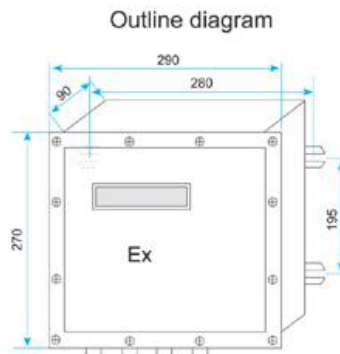
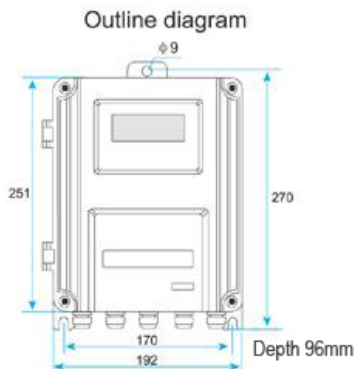
The BFU-100F is a fixed Ultrasonic Flow Meter for continuous measurement of volumetric flow.

Ultrasonic flow meters are now widely used in the industrial and building sectors for monitoring water systems, chemical output and energy efficiency monitoring. Their simplicity and reliability has seen their widespread adoption throughout the world as an accurate and reliable method of quantifying liquid flow measurement.

These flow meters can be used on virtually any pipe size or material, are non-invasive and therefore not prone to the levels of deterioration that are seen by intrusive flow meters.



Accuracy	<1% of reading above 0.6ft/sec / 0.2 m/sec
Repeatability	0.2% fixed installation
Pipe Size	25 - 6000mm (dependant on transducers chosen)
Operating Temperature	
Transducers	-40°C to +160°C (Insertion Option: -40°C to +160°C)
Instrument	-10°C to 70°C External Environment
Datal-ogging	The totaliser data from the last 64 days / 64 months / 5 years;
Output	1x 4-20mA and 1x Relay 1x Pulse OCT
Power	24V DC or 85-260 V AC
Dimensions	210 x 251 x 96 mm
Weight (Control Unit)	6.6lbs (3kg)
Channels	Option to measure two flows with single transmitter.



FEATURES:

Positive / Negative / Net flow totaliser. Water Volume m3	Proprietary low-voltage transmission and self-adapting sensor technology. Anti-interference design.
Dual CPU. 100 Pico-second measurement rate resolution.	Operates with all of our transducers, including clamp-on, insertion and flow-cell (spool-piece) wetted types.
Die-cast aluminium weather-resistant enclosure (standard version IP65).	Able to measure electrically conductive and non-conductive liquids.
RS-232 interface. Complete communication protocol for instrument networking.	Can be used as a flow RTU.
5 channel 12 bits analogue 4-20mA input options	Scalable 4-20mA output (0-1kΩ Impedance)
2 channel programmable digital outputs (isolated OCT and Volt free contact (Relay)	Frequency output. (0 - 9,999Hz), alarm driver, or totaliser, pulse output, ON/OFF control, etc.
Alternative Batch controller operation feature.	2x 20 character backlit ,LCD display.
4x4-key, tactile membrane keypad buttons.	Internal Alarm Buzzer ,User Programmable alarm outputs.

FIXED ULTRASONIC TRANSDUCERS

A pair of clamp-on transducers to measure flow from outside the pipe are included complete with pipe clamps, meaning there is no pressure drop, there are no moving parts, no leaks and no contamination. The installation is very simple and no special skills or tools are required.



Technical parameters	BS1-ype	BM1-type	BL1-type	BS1H-type	BM1H-type
Pipe size(mm)	DN25-100	DN50-700	DN300-6000	DN25-100	DN50-700
Pipe size(inch)	(1"- 4")	(2"- 28")	(6"- 24")	(1"- 4")	(2"- 28")
Material	ABS			Special high-temperature materials	
Frequency	1Mhz				
Measurement method	V(N,W)	V,Z	Z	V(N,W)	V,Z
calibration	Calibrated with the main unit				
magnetism	Magnetic Mount &/or Band Clamp			Not magnetic, Band Clamp	
Temperature	32°F -158°F (0°C-70°C)			32°F -320°F (0°C-160°C)	
Ingress Protection	IP65 (IP68 option)				
Dimensions(mm)	45×30×30	60×45×45	80×70×55	90×85×24	90×82×29
weight (g)	75	250	650	94	150
Liquid types	Water, sea water, waste water, chemicals, aggressive liquids, oil, crude oil, alcohol, beer, etc.				
Suspension concentration	≤20000 ppm, may contain a very small amount of air bubbles.				
Pipe material	All metals, most plastics, fibre glass, etc,				
Dedicated shielded transducer cable	Shielded transducer cable, can be extended to 500 metres on request – call Bell Flow Systems				



FIXED INSTALLATION ULTRASONIC FLOW METER

A B C D E F G H I J

BFU-100F □—□—□—□—□—□—□—□—□—□—□—□

Letter	Parameter	Option
A	Main board version	13: Version-13 (for panel type) 15: Version-15 (for wall-mount type)
B	Main unit type	1: standard wall-mount type 2: wall-mount enclosure type 3: standard panel type
C	Power	A: AC 85-264VAC D: DC 24VDC
D	transducer	B: 1: BS1-type Clamp-on transducer for small pipe 2: BM1-type Clamp-on transducer for middle pipe 3: BL1-type Clamp-on transducer for large pipe 4: BS1H-type Clamp-on high temperature transducer for small pipes 5: BM1H-type Clamp-on high temperature transducer for medium pipes C 1: B-type insertion wetted transducer 2: Cement insertion wetted transducer G: pipe transducer (less than DN40 use the PI-type transducer, more than DN50 use the Standard-pipe transducer)
E	Pipe size	DN(mm) _____
F	Pipe material	0: Carbon steel 1: Stainless steel 2: cast iron 3: FRP 4: PVC 5: Cement
G	Nominal pressure	MPa
H	Signal output	N: None A: 4-20mA output(note range) F: OCT output R: Relay output 4: RS485 output (note baud rate, communication check digits)
I	Signal input	N:None 1: one channels 4-20mA analog input (note range) 2: two channels 4-20mA analog input (note range) 3: three channels 4-20mA analog input (note range)
J	Cable(single cable length)	Meter(type is four-core cable, others are two-core cable)

For example: BFU-100F15-1-A-B2-300-2-1.6-N-N-100