



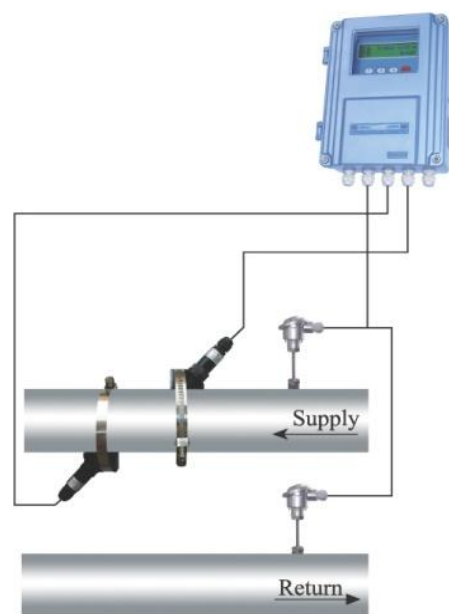
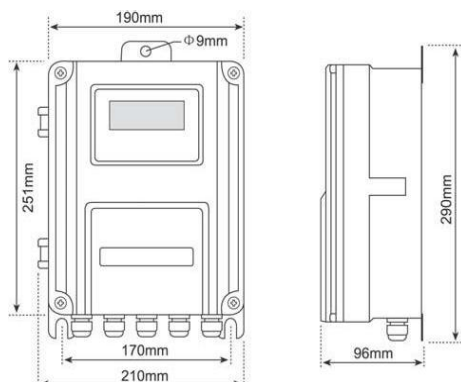
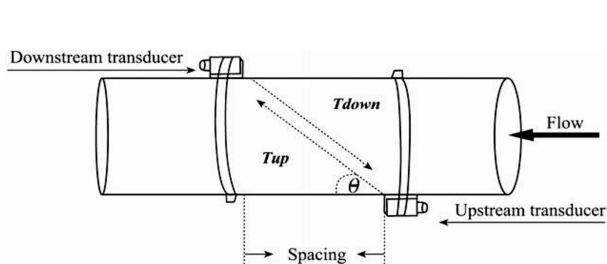
## BFU-100RF

The BFU-100RF is a fixed ultrasonic Heat Meter for continuous measurement of volumetric flow and heat energy.

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

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
Data-logging	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 m <sup>3</sup> / Heat Energy Kwh	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 (0-1k 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. The **Pt100** Temperature probes supplied can be clamp-on, Magnet mount, stick on or pocket fit (see options at time of order)



BS1H-VERSION



BM1H-VERSION

Technical parameters	BS1H Version	BM1H Version
Pipe size(mm)	DN25-100	DN50-700
Pipe size(inch)	(1 - 4 )	(2 - 28 )
Material	Special high-temperature materials	
Frequency	1Mhz	
Installation method	V : (N or W)	V : Z
calibration	Calibrated with the main unit	
magnetism	No magnetic influence	
temperature	0 °C-160 °C	
Protection class	IP65 (IP68 option)	
Dimension(mm)	90x85x24	90x82x29
weight	94 grammes	150 grammes
Liquid types	Water, sea water. waste water, chemicals, oil, alcohol ,beer ,etc.	
Suspension concentration	m20000ppm, may contain a very small amount of air bubbles.	
Pipe material	All metals, most plastics, fiber-glass, etc,	
Dedicated shielded transducer cable	3m Shielded transducer cables are supplied as standard , , contact Bell Flow Systems for longer cable requirements (max 500m)	

## Fixed Installation ultrasonic Heat Meter

A B C D E F G H I J K

BFU-100RF

Letter	Parameter	Option
A	Mainboard 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-mount type
C	Power	A: AC 85-264VAC D: DC 24VDC
D	transducer	BS1H-type Clamp-on high temperature transducer for small pipe BM1H-type Clamp-on high temperature transducer for medium pipe
	Pipe size	DN(mm)
F	Pipe material	0: Carbon steel 1: Stainless steel 2: cast iron 3. Other (Specify)
G	Nominal pressure	MPa
H	Thermal unit	K: KC(therm) G: GJ B: BTU H: KWH(kilowatt-hour)
I	Signal output	N: None A: 4-20mA output(note range) F: OCT output R: Relay output 4: RS485 output(note baud rate 、 communication check digit)
J	Signal input	N: None 1:one channel 4-20mA analog input (note range ) 2: two channels 4-20mA analog input ( note range ) 3: three channels 4-20mA analog input ( note range )
K	Cable(single cable length)	Meter,( type is four-core cable, others are two-core cable)

For example: BFU-100RF15-1-A-B4-50-0-1.6-K-N-N-10



Wiring diagram

