



Ultrasonic Meter Type BTU METER , RESIDENTIAL

uFlow 230 SERIES

DN15 - 40



1. Introduction

The **uFlow 230** series ultrasonic BTU meter can be used for measuring the energy consumption in heat / cooling application for billing purpose. The measurement principle is static and based on the measurement of transit time with pair of ultrasonic transducer propagating at each other upstream and downstream. All calculation and flow measurement circuits are designed on one circuit board, thus offering exceptional accuracy and reality.

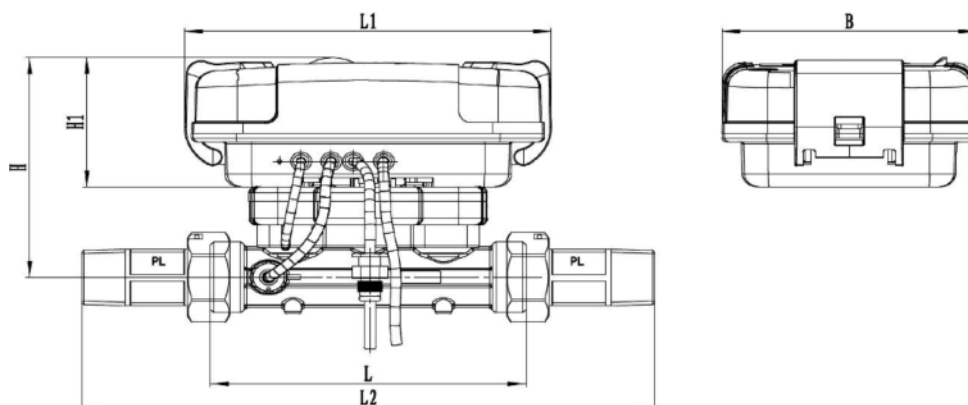
2. Features

- High capacity 3.6 lithium battery inside, above 8 till 10 years shelf life.
- Dynamic range of 250:1, 100:1, 50:1
- Can be mounted in flow pipe or return pipe, and can be mounted horizontally or vertically.
- Support optical, RS485 and wired & wireless M-bus interface, convenient for user to manage data in different manners.
- Complies to Modbus RTU and EN13757 communication protocol.
- Certified by CMC and MID.
- Advanced calibrating device, adopt international advanced automatic heat meter calibration device, ensure the product accuracy.
- Can be used as cooling, heat or combined climatic meter.

3. Application

- Green building management
- Tenant billing
- Energy management

4. Dimensions



Nominal Diameter (mm)		15	20	20	15	20	20	20	20	25	25	32	40
Nominal flow rate (m³/h)		0.6	0.6	0.6	1.5	1.5	1.5	2.5	2.5	3.5	6	6	10
Dimension (mm)	Body Length, L	110	130	190	110	130	190	130	190	160	260	180/260	200/300
	Overall Length, L2	200	230	290	200	230	2990	230	290	260	360	280/360	300/400
	Calculator Length, L1	150	150	150	150	150	150	150	150	150	150	150	150
	Height, H	100	103	103	100	103	103	103	103	106	106	109	113
	Calculator Height, H1	60	60	60	60	60	60	60	60	60	60	60	60
	Calculator Breadth, B	105	105	105	105	105	105	105	105	105	105	105	105
Screw thread		G3 / 4B	G1B	G1B	G3 / 4B	G1B	G1B	G1B	G1B	G1 / 4B	G1 1/4B	G1 1/2B	G2B
Screw thread coupling		R1/2	R3/4	R3/4	R1/2	R3/4	R3/4	R3/4	R3/4	R1	R1	R1 1/4	R 1 1/2
Working Pressure		1.6MPa (2.5MPa can be customized upon request)											
Qp:Qi		50:1, 100:1, 250:1											

5. Technical Specification

SPECIFICATIONS - Calculator	
Display	LCD, 8 digits Energy, power, volume, temperature, flow rate
	Cummulative heat energy: KWh or MJ (display range: 0~9999999.9), Thermal power: KW
	Instantaneous flow: m ³ /h, cumulative volume:m ³ , Supply water temperature: °C. Return water temperature: °C, Temperature difference, Total operating time
Approval	MID
Language	English
Ambient Storage Temperature	A Class (5~55) °C or B Class (-25~55)°C optional
Temperature Measuring Range	4-95°C, 130°C can be customized
Temperature Sensor	PT1000 (PT500, PT100 can be customized)
Cable length of temperature sensor	1.3 meters
Power supply	3.6V lithium battery
Battery lifetime	≥10 years
Installation	Horizontal or vertical
Communication	Modbus, M-bus, optical, pulse
IP rating	IP67
Accuracy	Class 2
Mounting Position	Vertical or horizontal

TECHNICAL PARAMETER	
Flow velocity	0.1 ~ 7m/s
	0.15~12m/s (need to be customized)
Maximum Volume	999999.99
Maximum Heat	999999999

6. Order Information

Model Number, Example and Option								Description
U-230	- H -	DN40	- I	- 1	- D	- C	- N	
Meter Type	H							Heat
	CH							Cooling / Heat
Meter Size		DNX X						Please specify size (DN15-40)
Installation Situation		I						Inlet
		O						Outlet
Output Interface Option			0					M-Bus
			1					RS485 / Modbus *
			2					Pulse *
			3					BACnet *
			4					GSM wireless **
			5					RF wireless **
			6					Others please specify
Power Supply				D				24VDC
				A				95-265VAC
				1				Battery Supply ***
Connection Type						C		Brass thread with extension fittings
Temperature Range							N	4 ~95 °C (Default)
							H	4 ~130 °C
Extra Requirement								(Eg. Cable length, probe type)

- * External power required for communication
- ** Converter would be used to provide required communication
- *** For display monitoring

Example:

U-230-H-DN40-I-1-D-C-N calls for thread type DN40 BTU meter; RS485 Modbus interface; 24V DC External Supply; ; Temperature range: 4~95°C

Cable length:

- Flow sensor cable (Default: 0.6 meter)
- Temperature probe cable (Default: 1.3 meter)

Pressure rating:

- 1.6MPa (Default)
- 2.5MPa (Customized)

Temperature probe type:

- PT1000 (Default)
- PT500



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