



Ultrasonic Meter Type BTU METER , DISTRICT

uFlow 230 SERIES

DN50 - 100



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.

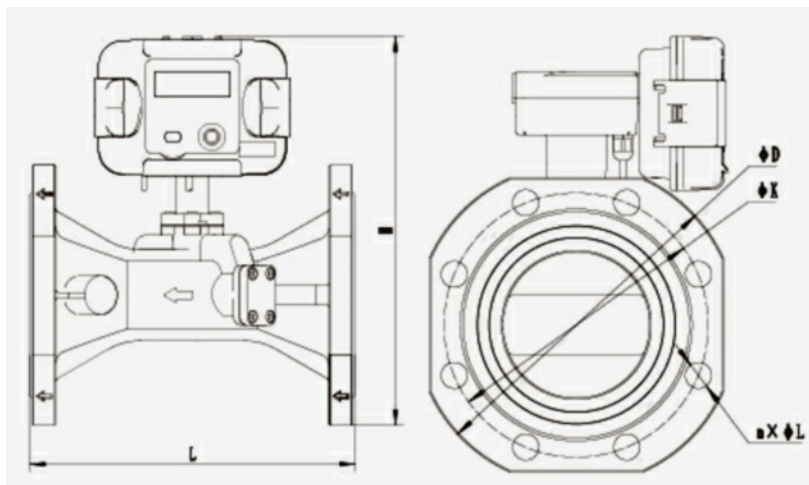
2. Features

- 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)		50	65	80	100
Nominal flow rate : qp (m³/h)		15	25	40	60
Dimension (mm)	L	200/ 270	200 /300	225 / 300	250 / 360
	D	165	185	200	220
	H	247	258	279	299
	K	125	145	160	180
	N x ΦL	4 x Φ18	4 x Φ18	8 x Φ18	8 x Φ18
Weight (kg)		8	9	12	15
Channel		Single or Bi-channel optional			
Pressure Loss (kPa/qp)		4	6	9	11
Working Pressure		1.6MPa (2.5MPa can be customized upon request)			

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 -	DN50	- I	- 1	- D	- C	- N	
Meter Type	H							Heat
	CH							Cooling / Heat
Meter Size	DNXX							Please specify size (DN50-100)
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 ***
Flange Connection			D					DIN (EN13757)
			A					ANSI
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-DN50-I-1-D-D-N calls for thread type DN50 BTU meter; RS485 Modbus interface; 24V DC External Supply; DIN Standard; 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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