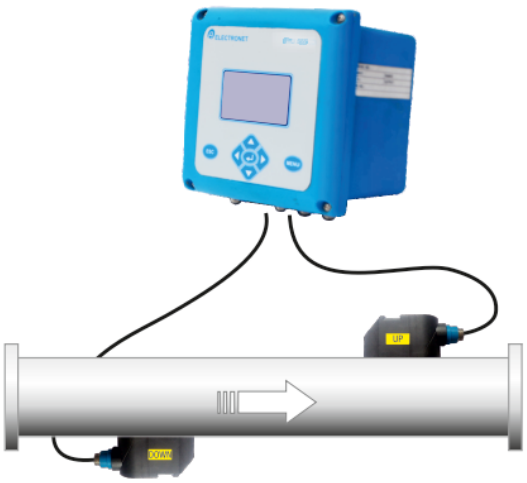
BTU 200

BTU METER

ELECTRONET

Insertion Type Ultrasonic Flow Meter



Clamp on Ultrasonic Flow Meter

BTU 200 System comprises of:

Insertion Ultrasonic / Clamp on Type Ultrasonic Flow Meter
A set of two Temperature Sensors
BTU Meter (Calculator/Indicator)

Features

- Highly Accurate and Reliable Metering Systems
- Flow meters Calibrated at our in-house NABL Accredited Flow Calibration Facility.
- Precise Temperature Measurement by High Performance Temperature Sensors
- Network Compatible Communication Protocols
- Availability of various Engineering Units for Displaying Measured Parameters
- User Friendly Interface via Display and Keypad
- Simple Installation and Commissioning
- Data Storage & Log View Facility

Applications

Chilled & Hot Water Systems for:

- Industrial Water Systems
- Domestic as well as Commercial Complexes & Office Buildings
- Central Plant Monitoring
- Institutional Energy Cost Allocations
- Educational Campus Monitoring
- Water Management Systems

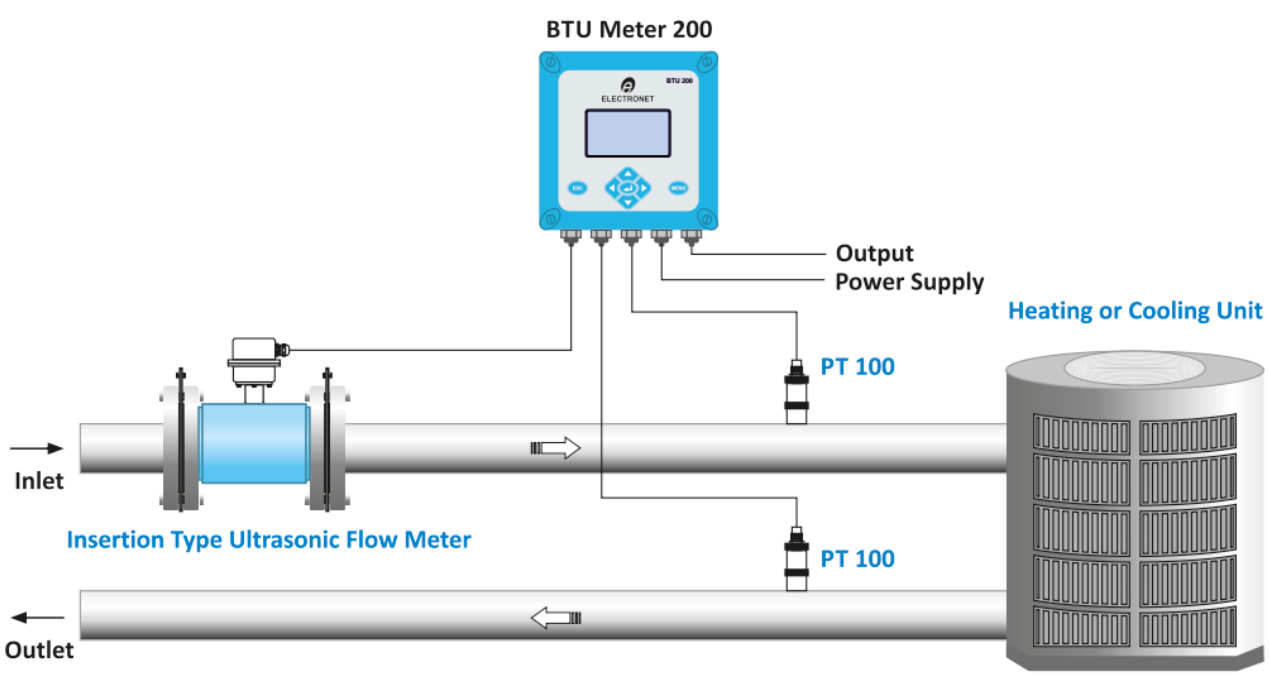
Description

Electronet Series BTU 200 is a BTU metering system designed for measuring thermal energy flow & energy consumption in water based systems. BTU 200 system is specially designed for water based systems/installations at industrial, commercial as well as domestic areas of application. This system comprises of Insertion type Ultrasonic /Clamp on type Ultrasonic flowmeter for highly accurate flow measurement, a pair of temperature sensors for reliable temperature measurement at the inlet as well as outlet and BTU Calculator/Indicator with LCD display. Ultimately, BTU 200 is an ideal choice for the measurement and indication of Flow of the Media and Net

Technical Specifications

Performance Characteristics	
Power Supply	90 - 270V AC / 24 V DC
Power Unit	BTU/hr or KW
Energy Unit	BTU or KW/Hr
Display	LCD
Accuracy	+/-0.1% Measured Value
Flow Meter Input	4 to 20 mA DC
Temperature Input	A set of two PT-100 Sensors
End Connection	DIN, ANSI 150, BS or Threaded Connection
Output (Analog)	4 to 20 mA DC
Energy Function	Heat / Cool
Configurable Display in Energy & Power	W, BTU, Cal & J
Sampling Period	1 Sec.
Environmental Temperature	Up to 65^{o}C
Water Temperature	0 to 180^{o}C
Enclosure Class	IP 65
Mounting	Panel or Pipe
Dimensions	155 mm (H) x 155 mm (W) x 126 mm (D)
Options	
Output (Digital)	2 Nos. Potential Free Relay 1 C/O 1 amp @230 V
Communication Interface	RS485
Thermowell	Fabricated / Barstock

BTU System Installation Layout for Insertion Type Ultrasonic Flow Meter



BTU System Installation Layout for Clamp on Type Ultrasonic Flow Meter

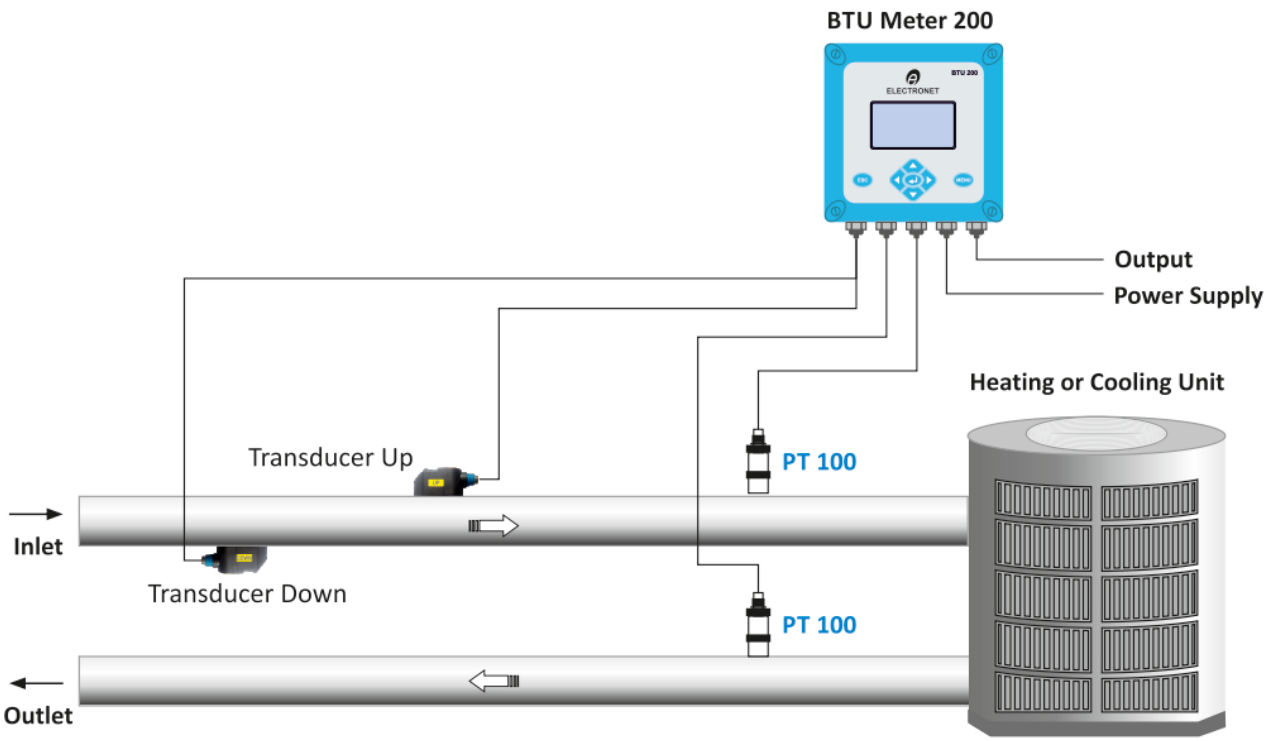


TABLE : Dimensional Details Of Flange, as Per ANSI 150 # B-16.5

Refer Fig.1 & 2

Line Size		Flange To Flange Distance	Flow Range (m^3/Hr)			
Inch	NB		Velocity 0.3m/s	Velocity 2.5m/s	Velocity 6m/s	Velocity 10m/s
½"	15	200	0.19	1.59	3.81	6.36
¾"	20	200	0.34	2.83	6.785	11.31
1"	25	200	0.53	4.42	10.602	17.67
1¼"	32	200	0.87	7.24	17.371	28.95
1½"	40	200	1.36	11.31	27.143	45.24
2"	50	200	2.12	17.67	42.4115	70.69
2½"	65	200	3.58	29.86	71.675	119.46
3"	80	200	5.43	45.24	108.573	180.96
4"	100	250	8.48	70.69	169.646	282.74
5"	125	250	13.25	110.45	265.071	441.79
6"	150	300	19.09	159.04	381.703	636.17
8"	200	350	33.93	282.74	678.584	1130.97
10"	250	450	53.01	441.79	1060.28	1767.15
12"	300	500	76.34	636.17	1526.81	2544.69

Note : Flange to flange distance (FD) Tolerance : 1) 1/2"(15NB) to 6"(150NB) : +/-3mm 2) 8"(200NB) to 12"(300NB) : +/-5mm

- All dimensions are in 'mm'
- For dimensions of line size above 300NB, please consult factory.
- Typical mounting dimensions are for reference only.
- Wet Calibrated at IEC/ISO/EN17025 Accredited Calibration Rig.
- Flow meter should be selected with the help of Nomograph (recommended full scale velocity).

Ordering Information of Transmitter

Sample Order Code: BTU 200-TX-A1-B1-C1-D1-E1-F1-G1-H1

	Parameter	Code	Value
A	Transmitter Mounting	A1	Integral (Local)
		A2	Remote (Max 5 mtr)
B	Power Supply	B1	24 VDC
		B2	230 VAC
C	Enclosure MOC	C1	Aluminium Die Cast
		C2	SS316
		CY	Other
D	Enclosure IP Rating	D1	IP54
		D2	IP67
		D3	IP68
E	Electrical Connection	E1	M20
		E2	1/2 NPT
		EY	Other

	Parameter	Code	Value
F	Electrical Output 1 (Current)	F1	4 to 20 mA
		F2	4 to 20 mA with HART
		FX	NA
G	Electrical Output 2 (pulse)	G1	Pulse (OC)
		GX	NA
H	Communication Output 1	H1	RS-485
		HX	NA

Note :
- In case of flameproof version only electronics enclosure is flameproof certified.
- Accuracy defined at Lab Conditions.
- Relay & Alarms are programable. Relay 1 is programmable for High / Low / Batch.

Ordering Information of Flow Tube

Sample Order Code: BTU 200- FT15-N1-01-P1-Q1-R1

	Parameter	Code	Value	Code	Value
FT	Flow Tube	FT 15	15NB	FT 80	80NB
		FT 20	20NB	FT 100	100NB
		FT 25	25NB	FT 125	125NB
		FT 32	32NB	FT 150	150NB
		FT 40	40NB	FT 200	200NB
		FT 50	50NB	FT 250	250NB
		FT 65	65NB	FT 300	300NB
N	Electronics Location	N1	Integral (local)		
		N2	Remote (Max 5 mtr)		
O	Remote Signal Cable Length	O1	5 Meter		
		OX	NA		
P	Process Connection	P1	Flanged		
		P2	Threaded (Up to 50 NB)		
		P3	SMS Union		
		P4	Triclamp		

	Parameter	Code	Value
Q	Flange MOC	Q1	MS
		Q2	CS
		Q3	SS304
		Q4	SS316
		QX	NA
R	Flange Standard	R1	ASA150 B 16.5
		R2	ASA 300 B 16.5
		R3	ASA 600 B 16.5
		R4	DIN PN 10 EN 1092-1
		R5	DIN PN 16 EN 1092-1
		R6	DIN PN 25 EN 1092-1
		R7	DIN PN 40EN 1092-1
		R8	IS1538
		RY	Other
		RX	NA

Note:
- Due to our continuous product revisions, design specification and model numbers are subject to change without notice.
- Accuracy defined at Lab Conditions.
- For other requirement please consult factory.
- For 300 NB to 600 NB use Clamp on type Ultrasonic Flow Meter with medium sensor.
- This product is meant for laboratory/Process application only & not for custody transfer application.

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