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BTU METER

Series BTU 1010



Description

BTU 1010 is a newly designed, compact energy NxtGen BTU meter that is extremely useful for energy conservation. This meter combines the flow transmitter and BTU calculator in a single IP-65/IP-67 equivalent housing, thus reducing space and wiring at the site. It measures the thermal energy required for air conditioning. It accepts input from the flow meter for chilled water, the inlet temperature sensor, and the outlet temperature sensor. From this, the thermal power and energy consumed are calculated to maintain the temperature at a given level.

It supports various protocols such as MODBUS IP, or BACNET IP or RS 232/RS 485 using MODBUS RTU.

Advantages

- Compact Wall mounting design with IP 65/IP67 equivalent Enclosure, that can withstand adverse natural conditions
- The transmitter and BTU calculator are combined in a single state-of-the-art housing, reducing space and wiring requirements
- Choice of mounting either on the inlet or on the outlet as per site conditions
- Data storage up to 200 days with hourly storage facility with real-time
- Backup of total flow maintained on power failure to avoid errors in energy calculations
- Serial Interface with a computer through MODBUS RTU / MODBUS IP / BACNET IP
- Choice of engineering units for power: Kw / MBTU/hr / TR
(*Note - Submitted for certification)

Technical Specifications

Model No. : BTU 1010

Input	: Microvolt signal proportional to flow rate from a primary flow sensor (Electromagnetic) : Empty Tube signal from primary flow sensor : RTD, PT - 1000 input from Inlet Sensor, : RTD, PT - 1000 input from Outlet Sensor, : Two isolated digital inputs (optional)
Output	: a) Pulsed DC output supply to excite the field coils in the sensor : b) 4-2mA dc, in max 600 Ω load, isolated, proportional to power or flow rate configurable : c) Pulsed output 1 pulse/0.1unit or 1pulse/unit or 1pulse/10unit, 1pulse/100unit Configurable, open collector (Rated for 24Vdc@30mA) proportional to flow rate : d) PC Communication via RS232/RS485 using MODBUS RTU Protocol or MODBUS IP protocol or BACNET IP protocol : e) Two isolated open collector digital outputs for alarm (High/Low) or Flow Direction status forward or reverse or empty tube detection (Rated for 24Vdc@30mA)
Display	: 16 characters x 2 rows LCD display (For instantaneous Total Power energy, Engg. Units, fault messages, etc)

Power Unit : MBTU/hr / KW/TR Programmable

Energy Unit : MBTU / KWhr/TR hr Programmable

Operating Temperature : 0 to 50°C

Inlet RTD Sensor Temperature : -20°C to 50°C

Outlet RTD Sensor Temperature : -20°C to 50°C

Temperature Drift : 0.015 % / °C maximum of Full Scale

Relative Humidity : 90% R.H.max. Non-condensing

Supporting Flow Sensors :

SROAT 2000P - DN2 to DN10

SROAT 1000 - DN10 to DN 20

SROAT 1000 Plus - DN25 to DN350

MEGA SROAT - DN 400 to DN 2000

Smart jalogh - DN50 to DN200

SG SROAT - DN25 to 101.6mm

Power Supply: 85 Vac to 265 Vac, 50 Hz,

Media Conductivity: $\sigma \geq 10\mu\text{S/cm}$

Accuracy : $\pm 1\%$ of actual flow rate between 100% to 10% of calibrated range

Repeatability : $\pm 0.2\%$ of reading

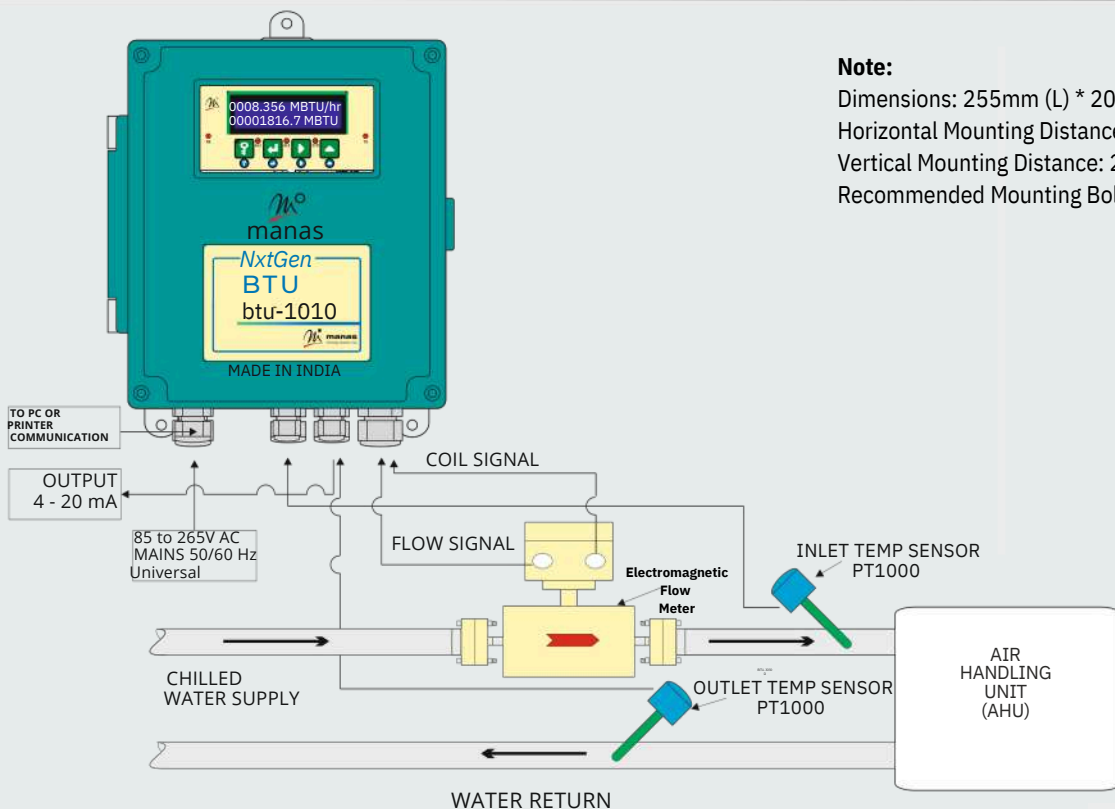
Dimensions : 255 mm (L) x 207 mm (W) x 92 mm (D)

Enclosure : Aluminum die-cast

Total Flow Backup : Backup of Total Flow maintained on power failure

Data Logging : 4900 readings (Hourly Logging) can be only viewed if LAN port

Application: Chiller/AHU .. Programmable



Note:

Dimensions: 255mm (L) * 207 mm (W) * 90 mm (D)

Horizontal Mounting Distance: 150mm

Vertical Mounting Distance: 240mm

Recommended Mounting Bolt: 6 mm

ORDERING INFORMATION

Sample code explained: DN50 - HR - SS316L - ANSI150 - CS - CS - BTU1010 - 2D - 1L - RS4 - RMT - U

DN 50

Flow Meter Size

DN10 : 3/8"	DN200 : 8"
DN15 : 1/2"	DN250 : 10"
DN20 : 3/4"	DN300 : 12"
DN25 : 1"	DN350 : 14"
DN32 : 1 1/4"	DN400 : 16"
DN40 : 1 1/2"	DN450 : 18"
DN50 : 2"	DN500 : 20"
DN65 : 2 1/2"	DN600 : 24"
DN80 : 3"	DN700 : 28"
DN100 : 4"	DN800 : 32"
DN125 : 5"	DN900 : 36"
DN150 : 6"	DN1000 : 40"

ANSI150

Flang / End Connection Standards

ANSI150	: ANSI150
IS1538	: IS1538
AWWA Class B	: AWWA
Any Other	: ZZ

CS

Flange / End Connection Material

Carbon Steel	: CS
Stainless Steel	: SS304
Any Other	: ZZ

CS

Body Material

Carbon Steel	: CS
Stainless Steel	: SS304
Any Other	: ZZ

BTU1010

BTU Calculator

BTU1010

2D

Flow Transmitter

Indication & Totalization : 2D

1L

Data Logging

Data Logging : 1L

RS4

Communication Facility

RS232	: RS2
RS485	: RS4
Modbus IP	: Modbus IP
BACNET IP	: BACNET IP
Any Other	: ZZ

RMT

Transmitter Mounting

Remote : RMT

U

Power Supply

85-265Vac, 50Hz	: U
Any Other	: ZZ

HR

Liner Material

PTFE	: PTFE
Hard Rubber	: HR
Neoprene	: NE
Any Other	: ZZ

SS316L

Electrode Material

SS316L	: SS316L
Any Other	: ZZ

Due to continuous development specifications are subject to change without prior notice.

