

WATER MASS FLOW TOTALIZER

- The WMFT-200(Wall) / WMFT-200P (Panel) Water Mass Flow Meter is suitable for measurement of mass flow of water.
- The unit displays instantaneous mass flow rate and totalized mass of water.
- Two Alarms can be configured on mass flow rate.

Features :

- Elegant, easy to operate keypad - just 4 keys take you to any of the operating modes of the instrument.
- Password protection on all programming modes (except display mode) to avoid wrong programming by unauthorized person.
- Fault Conditions - Indicated by different Error Codes.
- Alarm Status - Indicated by LED's on Front Panel.
- Blinking Flow rate display indicates overflow.
- Data logging : Approx readings : 3000 for normal logging & Approx 5500 readings for extended logging.**

Specifications :

- Mounting : Wall Mounting/ Panel Mounting.
- Enclosure : AL- Die-Cast(Wall Mounted) / ABS(Panel Mounted)
- Dimensions :
 - FOR WALL MOUNTING - 310mm (L) X 160mm (B) X 105mm (D)
 - Horizontal Mounting C to C distance = 130mm
 - Vertical Mounting C to C distance = 285mm
 - FOR PANEL MOUNTING - Bezel - 144mm (H) X 72mm (W)
 - Cutout - 138mm (H) X 68mm (W), Max Depth- 185mm
- Power Supply - 85 to 265V ac, 50Hz, Single Phase.
- Operating Ambient Temp. - 0 to 50°C
- Accuracy - $\pm 0.25\%$ of Full Scale
- Keyboard - 4 Numbers of Keys for Parameter Programming.
- Blinking Flow rate display will indicate overflow.
- For further specifications please refer specification sheet no. Fs-MFT-06**



WMFT - 200

ORDERING INFORMATION

COMPUTING UNIT

HET	Heat meter for Heat Transfer application
BTU	BTU meter for HVAC application
SFT	Steam Flow Totalizer
GFT	Gas Flow Totalizer
WMFT	Water Mass Flow Totalizer

MOUNTING

P	Panel
WM	Wall

COMMUNICATION PORT

RS2	RS232
RS4	RS 485

LOGGING

1L	Normal Logging
2L	Extended Logging

POWER SUPPLY

U	UNIVERSAL SUPPLY 85 to 265 VAC 50 Hz/60Hz
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BTU	WM	RS4	1L	U
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Due to continuous development specifications are subject to change without prior notice.

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Catalog No : Cc-COM-01



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Computing Units

Steam, Gas, Heat & BTU Applications.



Manas Microsystems Pvt. Ltd.



- Accuracy
- Quality
- Reliability
- Ingress Protection



HEAT METER FOR HEAT TRANSFER APPLICATION

- Manas has introduced heat energy transfer meter (HET) to measure thermal energy using various fluids, which are being used as heat transfer medium.
- Thermic fluid which acts as a heat carrier and circulated through the user equipment.
- It transfers the heat to the process through the heat exchangers.
- The instrument accepts signals from flow / DP transmitter, pressure transmitter (Two numbers) & temperature sensor / temperature transmitter (Two numbers) and gives the output in terms of 4-20mA which is proportional to Heat Power.



HET - 100 L

Specifications :

- Suitable for Thermic fluids like HYTHERM 500, HYTHERM 600, DOWTHERM A, DOWTHERM T etc.
- Dimensions: 260mm(L) x 160mm(B) x 90mm(D)
- Communication Port, RS 485 or RS 232 as per customer's choice with MODBUS-RTU.
- Display of 16 x 2 Big Characters LCD with BLUE Backlight.
- Buzzer on faults/Error.
- Fault Conditions - Indicated by different Error Codes.
- Accuracy of $\pm 0.25\%$ of Full Scale.
- Power supply : 85V to 265V AC, 50Hz, Single Phase (Universal)
- Operating Ambient Temp. : 0 to 50°C
- **For further specifications please refer specification sheet Es - HET - 01**

More Features :

- Data Logging facility available.
- Password protection on all programming modes (except display mode) to avoid wrong programming by an unauthorized person.
- **Data logging : Approx readings : 3000 for normal logging & Approx 5500 readings for extended logging.**

BTU METER FOR HVAC/CHILLER APPLICATION

- Manas make British thermal unit (BTU) calculator consists of Pair of temperature sensors with integral Energy computing capability unit to calculate Net Heat consumed.
- Also used for HVAC applications.
- It is used in centralized air conditioning systems.

$$\text{Net Heat} = Q_m \times (T_1 - T_2)$$

Where **Qm** : Flow rate of Cooling medium
T1 : inlet temperature
T2 : outlet temperature

Specifications :

- 4-20 mA output proportional to power output.
- Dimensions: 220mm(L)X120mm(H)X90mm(D)
- 16x2 LCD, 9 digits for total energy & 5 digits for instantaneous power.
- The engineering unit can be selected as either KW & KWHr or BTU/Hr & BTU.
- Communication port RS 232/485 is available with MODBUS RTU.
- **For further specifications please refer specification Es - BTU - 01.**

Main Features :

- Based on calculations of thermal power & energy consumed through measurement of flow, temperature difference of inlet & outlet of the medium.
- Password protection on all programming modes (except display mode) to avoid wrong programming by an unauthorized person.
- Backup of totalizer on power failure in non volatile memory.
- Buzzer indication for faults/Error with blinking LED (Programmable).
- **Data logging : Approx readings : 3000 for normal logging & Approx 5500 readings for extended logging.**



BTU - 100 L

STEAM FLOW TOTALIZER

- The SFT200 Steam Flow Meter is suitable for measurement of mass flow of superheated & saturated steam.
- The unit displays instantaneous mass flow rate and totalized mass of steam.
- Unit offers facilities for accurate flow totalizing in compensated mode.
- It computes instantaneous density from online pressure & temperature signals, as per ASME norms & computes the mass flow as per guide lines from BS1042 / ISO: 5167.

Features :

- Elegant, easy to operate keypad - just 4 keys take you to any of the operating modes of the instrument.
- Seven user friendly operating modes :
- Password protection on all programming modes (except display mode) to avoid wrong programming by an unauthorized person.
- Blinking Flow rate display indicates overflow.
- Indication of Steam Status – Saturated or Superheated.
- **Data logging : Approx readings : 3000 for normal logging & Approx 5500 readings for extended logging.**



SFT - 200

General Specifications :

- Mounting - Wall / Panel.
- Enclosure - AL Die-Cast/ABS Plastic.
- Power Supply - 85 to 265V ac, 50Hz, Single Phase.
- Dimensions- WM Type:310(L)x160(W)x105(D)
- Dimensions- PM Type :
 Bezel -144mm(H)X72mm(W)
 Cutout- 138mm (H)X68mm (W)
 Max depth- 185mm
- Accuracy - $\pm 0.25\%$ of Full Scale.
- Pressure Unit - Kg/cm² (g) or Bar (g).
- Steam Pressure - 1 to 100Kg/cm² (a) max.
 Steam temperature - 100°C to 600°C max for superheated steam, & 100°C to 309.6°C max for saturated Steam.
- **For further specifications please refer specification sheet no. Fs-MFT-05**

GAS FLOW TOTALIZER

- The GFM series GFT-100 is suitable for measurement of mass flow of gases.
- The unit displays instantaneous mass flow rate and totalized mass of gas.
- It computes instantaneous density from instantaneous pressure & temperature signals & computes the mass flow as per guide lines from BS1042 / ISO: 5167. As per standard, the equation for mass flow when measured with orifice states :

$$Q_m = \sqrt{\rho} \cdot \sqrt{\Delta P} \text{ [sq. root of density x sq root of } \Delta P \text{]}$$

Where, **Qm** = mass flow rate
ρ = instantaneous density
ΔP = differential pressure

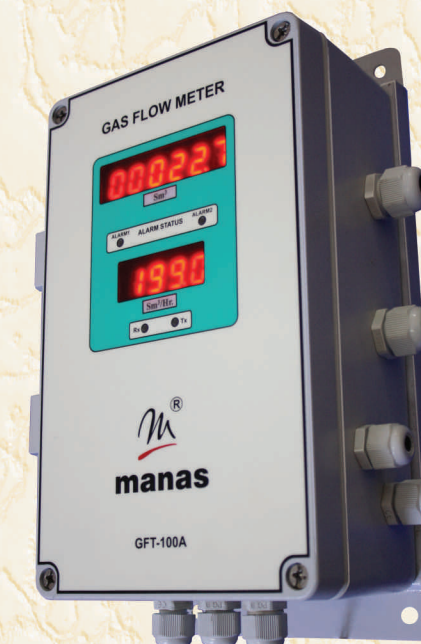
Features :

- Elegant, easy to operate keypad.
- Password protection on all programming modes (except display mode) to avoid wrong programming by an unauthorized person.
- Printer interfaces to print online data OR saved data (Optional feature).

Specifications :

- Mounting - Wall Mounting/Panel Mounting.
- Computer interface to supervisory computer through RS- 232 or RS-485 communication link.
- Power Supply - 85 to 265V ac, 50Hz, Single Phase.
- Accuracy - $\pm 0.25\%$ of Full Scale.
- Pressure Range = 1 to 50Kg/cm² (g) or Bar(g) max.- Programmable
- Separate terminals are provided for both types of inputs.
- Flow Type - Compensated / Uncompensated, Programmable.
- Enclosure – AL Die cast /ABS Plastic.
- Dimension- WM Type : 310(L)x160(W)x105(D)
- Dimensions-PM Type : Bezel - 144mm(H)X72mm(W)
 Cutout - 138mm(H)X68mm(W)
 Max depth - 185mm

- **Data logging : Approx readings : 3000 for normal logging & Approx 5500 readings for extended logging.**
- **For further specifications please refer specification sheet no. Fs-MFT-05.**



GFT - 100