Ultrasonic Energy Meter

HOW TO ORDER

- Choose 1 ultrasonic energy meter model
- Choose pipe fitting model given the appropriate fitting size (for DN15 to DN40 only)

Example: TUF-150-MD, Fitting Size A, select pipe fitting Model WM-ACC-C01 or WM-ACC-C11.

HOW TO ORDER ONLINE TODAY!

dwyer-inst.com/Product/SeriesTUF

FEATURES/BENEFITS

- Lower maintenance costs with local parameter display and no moving parts
- BACnet MS/TP or Modbus® RTU data communication protocol output allows for easy transfer of data
- Flow and temperature monitor in one unit eliminates the need for multiple units
- Produced to meet EN1434 MID approval for accuracy and quality

APPLICATIONS

- Heat metering
- Utilities billing
- Tenant billing
- Monitoring of water heating or cooling: radiators, fan coils

DESCRIPTION

The Series TUF Ultrasonic Energy Meter is a highly accurate and stable energy meter. It utilizes ultrasonic technology to measure heating and cooling energy consumption. The Series TUF incorporates a flowmeter, temperature meter, and a calculator into a single, compact unit. The size and lack of moving parts means the Series TUF requires minimal maintenance. The 8-digit LED display enables easy reading of the meter's recorded values; including temperature, flow-rate, energy consumption, etc. These features make it ideal for installation on chillers, boilers, and individual apartment piping. With the optional couplings it is capable of being used with either NPT or BSPT pipe sizes. It is the perfect meter for tenant billing applications.

ACCESSORIES

Fitting Size | Pipe Fitting Model® | Process Connection Size | Weight (lb) | Weight (kg)
--- | --- | --- | --- | ---
A | WM-ACC-C11 | 1/2” NPT | 0.19 (0.9) | B | WM-ACC-C01 | 1 1/4” BSPT | 0.39 (1.8)
B | WM-ACC-C02 | 3/4” NPT | 1.2 (0.5) | C | WM-ACC-C03 | 1” NPT | 1.8 (0.8)
C | WM-ACC-C04 | 1” BSPT | 1.8 (0.8) | D | WM-ACC-C05 | 1-1/4” NPT | 2.3 (1.1)
D | WM-ACC-C06 | 1 1/4” BSPT | 2.3 (1.1) | E | WM-ACC-C14 | 1-1/2” NPT | 4.4 (2)
E | WM-ACC-C15 | 1-1/2” BSPT | 4.4 (2)

*A pipe fitting is required to use the DN15 to DN40 energy meters. The DN50 has a flange connection and does not require a pipe fitting.

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ULTRASONIC ENERGY METER SERIES TUF

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SPECIFICATIONS

Service
Clean, compatible fluids.

Wetted Materials
Brass and 316 SS.

Range
See chart.

Display
8-digit LED.

Accuracy
BTU: EN1434/CJ128 Class 2; Flow: ±(2+(0.02 Qp/Q))%; Temperature: ±0.1°C.

Power Requirements
24 VAC/VDC (model dependent) or 3.6 V ER26500 lithium metal battery, user supplied and installed, battery acts as back-up if power is lost.

Power Consumption
1 W.

Temperature Limits
Ambient: 41 to 131°F (5 to 55°C); Process: 36 to 203°F (2 to 95°C).

Humidity Limit
<93%.

Pressure Limits
232 psi (16 bar) for DN15 to DN40; 362 psi (25 bar) for >DN50.

Pressure Drop
<1.5 psi (10 kPa).

Flow Rate GPM [LPM]
<93%.

BTU: EN1434/CJ128 Class 2; Flow: ±(2+(0.02 Qp/Q))%; Temperature: ±0.1°C.

Flowmeter: 1%.

Mounting Orientation
Horizontal or vertical.

Enclosure Material
Plastic.

Agency Approvals
See chart.

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INSTALLATION

Mounting positions

Mounting rotation

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DIMENSIONS AND WIRING DIAGRAM

TUF-150/400

Installation diagram for TUF-150/400

TUF-500/2000

Installation diagram for TUF-500/2000

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**Ultrasonic Energy Meter**
is a highly accurate and weight lb (kg)

**ACCESSORIES**

**Example:**

- Choose 1 ultrasonic energy meter model
- Choose pipe fitting model given the appropriate fitting size (for DN15 to DN40 only)†

**How to Order**

- Choose pipe fitting model given the appropriate fitting size (for DN15 to DN40 only)†
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**SERIES TUF | ULTRASONIC ENERGY METER**

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**DS-TUF Rev. 4**

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**ACCESSORIES**

**Pipe Fitting Models**

<table>
<thead>
<tr>
<th>Model</th>
<th>Power Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUF-XXX-XX</td>
<td>24 VDC/VDC</td>
</tr>
<tr>
<td>TUF-XXX-XX-DC</td>
<td>24 VDC</td>
</tr>
</tbody>
</table>

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**FEATURING**

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