**Series TDMT**

**Thermal Dispersion Flow Meter**

No Moving Parts, 4 to 20 mA Output

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The Series TDMT Flow Meter is for use in industrial applications, and can be easily installed virtually non-intrusively into any pipe. This non-intrusive installation allows flow-sensing without obstruction of the pipe diameter. It is completely encapsulated in epoxy resin and is compact, rugged, shock and vibration resistant. It provides proven reliability and long-term stability, even under the harshest environmental conditions. The TDMT is made of stainless steel with a titanium option making it resistant to aggressive media. In addition to its small and compact size, the TDMT also comes with a choice of a 1˝ unit with 1˝ NPT union nut or a 1-1/4˝ unit with 1-1/4˝ union nut, as well as available extensions that can be used for pipes sized up to 10˝ in diameter. With an optional temperature output, this meter provides the user with a very broad range of usage. When trying to decide on the correct length, use the 1/7th law (the TDMT’s probe length needs to be 1/7th of the pipe diameter).

**PRINCIPLES OF OPERATION**

The TDMT operates according to a new calorimetric principle, allowing for a wide measuring range. This meter also provides a very short integration time, even at low flow rates, making it ideal for quick control loops. Its measurement accuracy at low flow rates is considerably better than all other competing measurement devices.

**SPECIFICATIONS**

- **Service:** Water, oil, compatible liquids, paste, glue, sludge and grease.
- **Wetted Materials:** 316 SS, optional titanium.
- **Flow Range:** Min: 0 to 0.66 ft/s (0 to 20 cm/s); Max: See model chart.
- **Accuracy:** <3% of full range.
- **Repeatability:** <1%.
- **Response Time:** 10 seconds.
- **Temperature Range:** (For optional output only) 32 to 212°F (0 to 100°C).
- **Pressure Limits:** 435 psi (30 bar).
- **Process Connections:** 1˝ unit: 1˝ NPT union nut; 1-1/4˝ unit: 1-1/4˝ NPT union nut.
- **Output Signal:** 4 to 20 mA for flow, optional 4 to 20 mA for temperature.
- **Power Requirements:** 24 VDC ±10%.
- **Resistive Load:** 0 to 600 Ω.
- **Current Consumption:** Approx. 100 to 200 mA (max. flow).
- **Electrical Connection:** 6.5 ft (2 m) moulded oilflex cable with three 21 AWG (0.5 sq mm) wires.
- **Enclosure Rating:** NEMA 4X (IP65).
- **Shipping Weight:** 1˝ unit: 5.6 oz (158.76 g); 1-1/4˝ unit: 13.4 oz (379.88 g).

**FEATURES**

- No moving parts
- Non-intrusive sensing
- Adjustable measuring range
- Base model works for pipe sizes up to 4˝ in diameter
- Weatherproof construction for wide application usage
- 316 SS for excellent chemical compatibility
- Optional titanium for high corrosive media
- Optional secondary output for temperature

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**Example**

**TDMT**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDMT-WS-1101</td>
<td>Water base, 1˝ unit, 0 to 6.56 ft/s (0 to 2 m/s)</td>
</tr>
<tr>
<td>TDMT-WS-1201</td>
<td>Water base, 1-1/4˝ unit, 0 to 6.56 ft/s (0 to 2 m/s)</td>
</tr>
</tbody>
</table>

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**Zero Point Potentiometer**

**Indicating LED**

**Measurement Range Potentiometer**

**Side View**

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**Model**

**W**

**S**

**T**

**Range**

<table>
<thead>
<tr>
<th>Fitting</th>
<th>Extension</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

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**316 SS**

**Titanium**

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**Series TD MT**

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