Measure batch and cumulative totals in liquid transfer systems with the Series TTM Electronic Totalizing Meter. The meter is designed for any pump, pressure, or gravity feed system with a 3 to 30 GPM (10 to 100 LPM) flow range. View batch and cumulative totals on the large 4-digit LCD display. Batch totals can be reset to measure flow during a single use. The cumulative total will automatically reset to zero when a maximum reading of 9999 is obtained. Models designed for use in water applications are constructed of Nylon and rated to 150 psig (10.3 bar). Aluminum models are calibrated for fuels and rated to 300 psig (20.7 bar).

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Application</th>
<th>Body Material</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTM10</td>
<td>Water*</td>
<td>Nylon</td>
<td>Gallons</td>
</tr>
<tr>
<td>TTM11</td>
<td>Water*</td>
<td>Nylon</td>
<td>Liters</td>
</tr>
<tr>
<td>TTM20</td>
<td>Fuels†</td>
<td>Aluminum</td>
<td>Gallons</td>
</tr>
<tr>
<td>TTM21</td>
<td>Fuels†</td>
<td>Aluminum</td>
<td>Liters</td>
</tr>
</tbody>
</table>

*Calibrated for use with water; †Calibrated for use with gasoline, diesel fuel and kerosene.

**SPECIFICATIONS**

- **Service:** Compatible liquids.
- **Flow Range:** 3 to 30 GPM (10 to 100 LPM).
- **Wetted Materials:** Bearings: Ceramic; Shaft: Tungsten Carbide; Rotor: Nylon 6-6; Rings: 316 SS; Body: TTM10, 11: Nylon 6-6, TTM20, 21: Aluminum; Other: TTM20, 21: Ceramic Magnet.
- **Accuracy:** ±5%.
- **Batch Total Maximum:** 9,999.
- **Cumulative Total Maximum:** 9,999.
- **Temperature Limits:** 14 to 130°F (-10 to 54°C).
- **Pressure Limits:** Nylon models: 150 psig (10 bar); Aluminum models: 300 psig (20 bar).
- **Pressure Drop:** 2 psi (0.14 bar) @ 30 GPM (100 LPM).
- **Maximum Particulate Size:** 350 microns.
- **Display:** 4-digit LCD, 5/8˝ H.
- **Auto Shut-off:** After 1 minute.
- **Connections:** 1˝ NPT.
- **Power:** Two AAA alkaline batteries (included).
- **Battery Life:** Approx. 9,000 hours.
- **Weight:** Nylon models: 0.4 lb (190 g); Aluminum models: 0.7 lb (340 g).
- **Agency Approvals:** CE.

Series TF Turbine Flow Sensors are suitable for a wide variety of industrial, commercial and laboratory flow applications. Sensors use a turbine wheel and electro-optical detection to convert flow rates into a linear 0 to 5 VDC signal for recording and datalogging. Models for use with liquids also provide a pulsed output for flow totalizing — see model TM2 on page 188 for a compatible display.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Range</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF1032</td>
<td>0.1 to 2.0 LPM</td>
<td>1/8 DD</td>
</tr>
<tr>
<td>TF1063</td>
<td>1 to 10 LPM</td>
<td>1/8 DD</td>
</tr>
<tr>
<td>TF1062</td>
<td>1 to 10 GPH</td>
<td>1/8 DD</td>
</tr>
<tr>
<td>TF1072</td>
<td>4 to 100 GPH</td>
<td>1/8 DD</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

- **Service:** Clean gases or clean low viscosity liquids (≤10 centistokes) depending on model.
- **Wetted Materials:** 40% glass filled polyphenylene sulfide PPS sensor, and fittings, sapphire bearing, Viton® O-ring.
- **Accuracy:** ±3% full scale.
- **Linearity:** ±3% full scale.
- **Repeatability:** ±0.2% full scale (liquid models), ±1% full scale (gas models).
- **Temperature Limits:** 122°F (50°C). Temperature Sensitivity: ±0.2% per °C.
- **Pressure Limits:** 100 psi (6.89 bar) at 20°C (liquid models); 40 psi at 20°C (gas models). Pressure Sensitivity: ±0.07% per mm Hg (for air at 1 to 3 atm).
- **Supply Voltage:** 12.5 ±2 VDC, 30 mA (connecting cable or cable/adapter sold separately).
- **Output:** 0 to 5 VDC (gas models), 0 to 5 VDC and 7.5 VDC peak pulse output, 0 to 400 pps typical (liquid models).
- **Weight:** 1 lb (0.5 kg).
- **Agency Approvals:** CE.

**ACCESSORIES**

- No. TF01, 220 VAC, 60 Hz power supply/adapter for liquid flowmeters
- No. TF02, 240 VAC, 50 Hz power supply/adapter for liquid flowmeters
- No. TF03, 120 VAC, 60 Hz power supply/adapter for gas flowmeters
- No. TF04, 240 VAC, 50 Hz power supply/adapter for gas flowmeters
- No. TF05, Optional connecting cable for liquid flowmeters
- No. TF06, Optional connecting cable for gas flowmeters