Flow Switches, Thermal

SERIES FS-2 | W. E. ANDERSON® BY DWYER

VANE FLOW SWITCH
Low Cost, Field Adjustable Set Point and Paddle

The SERIES FS-2 Vane Flow Switches offers an economical flow proving solution. The FS-2 paddles are adjustable to fit 1 to 8” size pipe.

FEATURES/BENEFITS
• Field adjustable set point adjustment screw allows for easy flow switch modification
• Custom application set points enabled by field adjustable vane layers
• Aluminum weatherproof housing permits outdoor installation

APPLICATIONS
• Boiler flow proving
• Hot water heaters
• Chillers
• Cooling lines
• Machinery
• Liquid transfer systems

APPROXIMATE ACTUATION/DEACTUATION FLOW RATES FOR WATER; GPM (LPM)

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Blade Vane Length in (mm)</th>
<th>Minimum Setting</th>
<th>Maximum Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1”</td>
<td>1.34 (34)</td>
<td>4.0 (15.0)</td>
<td>8.9 (33.3)</td>
</tr>
<tr>
<td>1-1/4”</td>
<td>1.34 (34)</td>
<td>5.3 (20.0)</td>
<td>11.4 (43.3)</td>
</tr>
<tr>
<td>1-1/2”</td>
<td>2.24 (57)</td>
<td>5.7 (26.7)</td>
<td>14.5 (55.0)</td>
</tr>
<tr>
<td>2”</td>
<td>2.24 (57)</td>
<td>14.1 (53.3)</td>
<td>31.3 (118.3)</td>
</tr>
<tr>
<td>2-1/2”</td>
<td>3.46 (88)</td>
<td>18.5 (70.0)</td>
<td>35.2 (133.3)</td>
</tr>
<tr>
<td>3”</td>
<td>3.46 (88)</td>
<td>27.7 (105.0)</td>
<td>52.8 (200.0)</td>
</tr>
<tr>
<td>4”</td>
<td>3.46 (88)</td>
<td>59.4 (225.0)</td>
<td>123.3 (466.7)</td>
</tr>
<tr>
<td>5”</td>
<td>3.46 (88)</td>
<td>52.8 (200.0)</td>
<td>123.3 (466.7)</td>
</tr>
<tr>
<td>6”</td>
<td>3.46 (88)</td>
<td>75.7 (286.7)</td>
<td>154.1 (583.3)</td>
</tr>
<tr>
<td>8”</td>
<td>3.46 (88)</td>
<td>184.9 (700.0)</td>
<td>356.4 (1300.0)</td>
</tr>
</tbody>
</table>

SERIES TDFS | W. E. ANDERSON® BY DWYER

THERMAL DISPERSION FLOW SWITCH
Non-Mechanical, Low Pressure Drop

The SERIES TDFS Thermal Flow Switch uses impulse thermal dispersion measurement technique to indicate whether the flow rate is above or below a user set flow rate. It provides NO and NC NPN outputs and two LED, one green and one red measurement technique to indicate whether the flow rate is above or below a user set point.

FEATURES/BENEFITS
• Better long term reliability and life expectancy than mechanical flow switches with no paddles or vanes to wear or break, no jams in the paddle movement, and no seals on movement assembly to wear or leak
• Not affected by empty pipe detection and avoids overheating by actively heating above the process temperature and then cooling down to process temperature
• Set point is easily field set by taping the included magnet on the set point target three times at the desired flow rate
• LED status indicators provide visual switch indication of set point
• Low pressure drop, only needs to be 10% into the flow (e.g. 1/8” for 3/4” schedule 40 pipe)

APPLICATIONS
• Boiler flow proving
• Hot water heaters
• Chillers
• Liquid transfer systems

SPECIFICATIONS

- Service: Compatible water-based fluids.
- Wetted Materials: 316 SS, 416 SS, 316 SS, Polysulfone, and FKM.
- Setpoint Range: 0.5 to 10 ft/s (0.15 to 3.0 m/s).
- Repeatability: 0.07 ft/s +3% of setpoint.
- Typical Deadband: 0.1 ft/s +15% of setpoint.
- Temperature Limits: Process: 5 to 185°F (-15 to 85°C) (non-freezing).
- Ambient: 5 to 167°F (-15 to 75°C).
- Storage: -40°F (-40°F to 85°C).
- Pressure Limits: 300 psig (20.67 bar).
- Switch Type: SPDT snap switch.
- Electrical Rating: 10 A res, 3 A ind @ 250 VAC.
- Electrical Connection: Cable gland with attached wire leads or optional conduit connection.

MODEL CHART

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDFS-1-P-06</td>
<td>Thermal flow switch, 6’ cable with cable gland</td>
<td>$169.40</td>
</tr>
</tbody>
</table>

Note: Consult factory for longer cable lengths.