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

The Series FS-2 Vane Flow Switch 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</th>
<th>Minimum Setting</th>
<th>Maximum Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length in (mm) Dim. X</td>
<td>Actuate</td>
<td>Deactuate</td>
</tr>
<tr>
<td>1&quot;</td>
<td>1.34 (34)</td>
<td>4.0 (15.0)</td>
<td>1.8 (6.7)</td>
</tr>
<tr>
<td>1-1/4&quot;</td>
<td>1.34 (34)</td>
<td>5.3 (20.0)</td>
<td>2.6 (10.0)</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>2.24 (57)</td>
<td>7.0 (28.0)</td>
<td>4.0 (15.0)</td>
</tr>
<tr>
<td>2&quot;</td>
<td>2.24 (57)</td>
<td>14.1 (53.3)</td>
<td>9.7 (36.7)</td>
</tr>
<tr>
<td>2-1/2&quot;</td>
<td>3.46 (88)</td>
<td>18.5 (70.0)</td>
<td>15.4 (58.3)</td>
</tr>
<tr>
<td>3&quot;</td>
<td>3.46 (88)</td>
<td>27.7 (105.0)</td>
<td>25.1 (95.0)</td>
</tr>
<tr>
<td>4&quot;</td>
<td>3.46 (88)</td>
<td>59.4 (225.0)</td>
<td>52.8 (200.0)</td>
</tr>
<tr>
<td>5&quot;</td>
<td>6.57 (167)</td>
<td>52.8 (200.0)</td>
<td>39.6 (150.0)</td>
</tr>
<tr>
<td>6&quot;</td>
<td>6.57 (167)</td>
<td>75.7 (288.7)</td>
<td>52.9 (200.0)</td>
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<tr>
<td>8&quot;</td>
<td>6.57 (167)</td>
<td>184.9 (700.0)</td>
<td>158.2 (600.0)</td>
</tr>
</tbody>
</table>

TEHERMAL DISPERSION FLOW SWITCH
Non-Mechanical, Low Pressure Drop

The Series TDFS2 Thermal Dispersion Flow Switch is a thermal flow switch that indicates whether the flow rate is above or below a user set flow rate. The unit incorporates two LED status indicators providing visual switch indication. The set flow rate (setpoint) is field adjustable and the unit has both NO and NC NPN outputs.

FEATURES/BENEFITS
- Better reliability and life expectancy than mechanical flow switches with no paddles or vanes to wear or leak
- Not affected by empty pipe as it avoids overheating by actively heating above the process temperature and then cooling down to process temperature
- Set point is easily field set by tapping the included magnet on the set point target
- LED status indicators provide visual switch indication of flow rate in comparison to the set point
- Low pressure drop; only needs to be inserted 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

MODEL CHART

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDFS2-1-P-06</td>
<td>Thermal flow switch, 6’ (1.83 m) cable with cable gland</td>
<td>$202.20</td>
</tr>
</tbody>
</table>

NOTE: Consult factory for longer cable lengths.

SPECIFICATIONS
- Service: Compatible water-based fluids.
- Wetted Materials: 316 SS.
- 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: Ambient: 5 to 140°F (-15 to 60°C), Process: 5 to 140°F (-15 to 60°C), Storage: -40 to 185°F (-40 to 85°C).
- Pressure Limits: 300 psig (20.67 bar).
- Response Time: Approximately 8 s.
- Power Requirement: 9-24 VDC.
- Switching Current: 400 mA, derate 5 mA/C above 23°C.
- Current Consumption: Average: 93 mA, Peak: 300 mA.
- Electrical Connection: 1/2” NPT cable gland with 4 conductor 22 AWG, 6’ (1.83 m) cable.
- Process Connection: 1/2” NPT male.
- Housing Materials: 316 SS, 416 SS, polycarbonate, neoprene, and acrylated urethane.
- Switch Type: 1 NO NPN, 1 NC NPN.
- Input Power and Protection: 0.5A fuse (resettable) reverse polarity protected.
- Switched Output Protection: 0.5A fuse (resettable) reverse polarity protected.
- Agency Approvals: CE.