**FLOW**

**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

**APPORXIMATE 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&quot;</td>
<td>1.34 (34)</td>
<td>Actuate</td>
<td>Deactuate</td>
</tr>
<tr>
<td>1-1/4&quot;</td>
<td>1.34 (34)</td>
<td>4.0 (15.0)</td>
<td>1.8 (6.7)</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>2.24 (57)</td>
<td>7.0 (26.7)</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>52.8 (200.0)</td>
</tr>
<tr>
<td>6&quot;</td>
<td>6.57 (167)</td>
<td>75.7 (286.7)</td>
<td>52.8 (200.0)</td>
</tr>
<tr>
<td>8&quot;</td>
<td>6.57 (167)</td>
<td>184.9 (700.0)</td>
<td>156.6 (5900.0)</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**
- Service: Compatible liquids.
- Wetted Materials: Bellow: Tin-bronze; Vane: SS; Body: Forged brass.
- Temperature Limit: 230°F (110°C).
- Pressure Limit: 145 psig (10 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.
- Set Point Adjustment: Four vane combinations and an adjustment screw.
- Enclosure: Die-cast aluminum alloy.
- Weight: 9.6 oz (0.3 kg).
- Agency Approvals: CE.

**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 point. 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 1% 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; 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 to 185°F (-40 to 85°C).
- Pressure Limits: 300 psig (20.67 bar).
- Response Time: Approximately 8 s.
- Power Requirement: 9 to 24 VDC.
- Switching Current: 400 mA, derate 5 mA/°C above 25°C.
- Current Consumption: Average: 93 mAh Peak: 300 mA.
- Agency Approvals: CE.