The SERIES V4 Flotec® Flow Switches are rugged and reliable, ideal for automatically protecting equipment and pipeline systems against damage from reduction or loss of flow. Time tested in thousands of pipeline installations and processing plants around the world this Series is Weatherproof, designed to meet NEMA 4 and Explosion-proof (listing included in specifications). This series can be used in pipes 1-1/2” to 30” (38.10 mm) and up.

**FEATURES/BENEFITS**

- Unique magnetically actuated switching design gives superior performance
- Features a free-swinging vane which attracts a magnet within the solid metal switch body, actuating a snap switch by means of a simple lever arm with no bellows, springs, or seals to fail
- Leak proof body machined from bar stock
- Electrical assembly can be easily replaced without removing the unit from installation so that the process does not have to be shut down
- Installs directly and easily into pipeline with a thredolet, tee, or flange (see application drawings)
- High pressure rating of 1000 psig (69 bar) with the brass body and 2000 psig (138 bar) with the 316 SS body
- Choice of custom vane calibrated for your application, Model V4, or field adjustable multilayer vane, Model V4-2-U (see set point chart)

**APPLICATIONS**

- Protects pumps, motors and other equipment against low or no flow
- Controls sequential operation of pumps
- Protects pumps, motors and other equipment against low or no flow
- Controls dampers according to flow
- Shuts down burner when air flow through heating coil fails
- Stops liquid cooled engines, machines and processing when coolant flow is interrupted
- Shuts down burner when air flow through heating coil fails
- Controls dampers according to flow

**SPECIFICATIONS**

Service: Gases or liquids compatible with wetted materials.

Wetted Materials: Vane: 316 SS; Body: Brass or 316 SS standard, 316 SS optional; Options: Other materials also available, consult factory (e.g. PVC, Hastelloy, Nickel, Monel, Titanium).

Temperature Limit: -4 to 175°F (-20 to 73°C) standard, MT high temperature option -4 to 163°F (-20 to 73°C); Process temperature limit -4 to 163°F (-20 to 73°C).

Pressure Limit: Brass body 1000 psig (69 bar), 316 SS body 2000 psig (138 bar), optional 5000 psig (345 bar) available with 316 SS body and SPDT switch only.

Enclosure Rating: Weatherproof and Explosion-proof. *Listed with UL and CSA for Class I, Groups C and D; Class II, Groups E, F, and G.

Agency Approvals: IECEx Certificate of Conformity: IECEx DEK 11.0071.

IECEx Standards: IEC 60079-1: 2007;
IEC 60079-9-1: 2007;
Zone 1. Also FM approved.

Switch Type: SPDT snap switch standard, DPDT snap switch optional.

Electrical Rating: UL, FM, ATEX and IECEx models 10 A @ 125/250 VAC (V~); CSA models: 5 A @ 125/250 VAC (V~); 5 A res., 3 A ind. @ 30 VDC (V~); MV option: 1 A @125 VAC (V~); 1 A res., 5 A ind. @ 30 VDC (V~); MT option: 5 A @ 125/250 VAC (V~); MT and MV option not UL, CSA, FM, ATEX or IECEx.

Electrical Connections: UL and CSA models: 16 AWG, 6” (152 mm) long, ATEX and IECEx unit: Terminal block.

Conduit Connection: 3/4” female NPT (19.05 mm standard or M25 with -BSPT option.

Process Connection: 1-1/2” male NPT or 1-1/2” male BSPT or 38.10 mm.

Mounting Orientation: With 5” of vertical for proper operation. Units for horizontal installation (vertical pipe with up flow) available.

Set Point Adjustment: For universal vane: five vane combinations.

Weight: 4 lb 8 oz (1.9 kg).

Agency Approvals: ATEX, CE, CSA, FM, IECEx, UL**.

**No housing option (-NH) has no approvals.

**WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov
FLOTECT® VANE OPERATED FLOW SWITCH
Field Adjustable — Dependable Protection Against Flow Variation or Stopping in Pipelines for Fluids, Gases and Flowing Solids

V4 UNIVERSAL VANE FLOW CHARTS
Values shown in both charts are nominal. If normal flows exceed actuation rates by less than 10%, custom vanes are recommended.
Figures are based on standard vertical installation in a 1-1/2" threaded branch connection in a horizontal run of pipe.

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

<table>
<thead>
<tr>
<th>Vane Layers</th>
<th>1.5” Pipe</th>
<th>2” Pipe</th>
<th>3” Pipe</th>
<th>4” Pipe</th>
<th>6” Pipe</th>
<th>8” Pipe</th>
<th>10” Pipe</th>
<th>12” Pipe</th>
<th>14” Pipe</th>
<th>16” Pipe</th>
<th>18” Pipe</th>
<th>20” Pipe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7-3</td>
<td>15-8</td>
<td>45-22</td>
<td>95-40</td>
<td>210-120</td>
<td>375-175</td>
<td>600-300</td>
<td>900-450</td>
<td>1200-600</td>
<td>1400-800</td>
<td>2000-1000</td>
<td>2400-1200</td>
</tr>
<tr>
<td>1,2,3,4 &amp; 5</td>
<td>11-7</td>
<td>60-60</td>
<td>180-400</td>
<td>310-200</td>
<td>620-350</td>
<td>1100-700</td>
<td>1500-900</td>
<td>2000-1200</td>
<td>2500-1400</td>
<td>3000-1500</td>
<td>4000-2000</td>
<td>4500-2200</td>
</tr>
</tbody>
</table>

Actuation rates are based on cold water at a specific gravity of 1.0.
For fluids of different specific gravity, actuation rates may be approximated by dividing the rate shown by the square root of the specific gravity.

### APPROXIMATE ACTUATION/DEACTUATION FLOW RATES FOR COLD AIR; SCFM (LPS)

<table>
<thead>
<tr>
<th>Vane Layers</th>
<th>1.5” Pipe</th>
<th>2” Pipe</th>
<th>3” Pipe</th>
<th>4” Pipe</th>
<th>6” Pipe</th>
<th>8” Pipe</th>
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<th>18” Pipe</th>
<th>20” Pipe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,2,3,4 &amp; 5</td>
<td>40-30</td>
<td>135-100</td>
<td>200-140</td>
<td>290-200</td>
<td>360-250</td>
<td>460-325</td>
<td>575-400</td>
<td>700-450</td>
<td>850-550</td>
<td>1000-600</td>
<td>1200-700</td>
</tr>
</tbody>
</table>

Actuation rates are based on cold air at standard conditions.
For gases at other pressures, temperatures, or specific gravities, consult factory for equivalent flow approximations.

### APPLICATION DRAWINGS
FOR FLOTECT® AUTOMATIC FLOW SWITCHES

- Threaded Branch Connection Installation.
- May also be installed using tee, flange or coupling.