Paddle Bellows Flow Switch
for Liquids

- Switching Ranges:
  0.9 ... 4.4 GPM up to
  375... 760 GPM water
- $p_{\text{max}}$: 435 psi, $t_{\text{max}}$: 250°F
- Connection: 1" NPT
- Material: Brass or Stainless Steel
- Microswitch: 250 V, 15 (8) A
- Universal Mounting Position
Description
The KOBOLOD model FPS flow switch operates according to the proven paddle bellows principle. The flowing media acts on the paddle thus actuating a microswitch. The switching point can be freely adjusted and the device mated to different nominal pipe sizes by means of the replaceable paddle in conjunction with the additional adjustment features. The electrical switching cavity is separated hermetically from the process fluid by means of a bellows. The FPS-6000P version of the flow switch has been specially designed for minimum switching values. See table for switching values. The devices can be installed in any orientation.

Dimensions

Technical Details
Brass design:
Bellows: MS 58 Bronze
Paddle: stainless steel 316L
Stainless steel design:
Bellows: stainless steel 321
Paddle: stainless steel 316L
Max. medium temperature: -40...+250°F
Max. ambient temperature: -31...+150°F
Max. allowed pressure: brass 160 PSIG
stainless steel 435 PSIG
Max. pressure loss: approx. 0.15...0.44 PSIG
Process Connection: 1" NPT male
Inlet and outlet pipe section: 5 times nominal pipe size

Electrical Details
Dust-proof microswitch: SPDT contact
Switching voltage: max. 24 - 250 V
AC
Switching current: max. 8 A (inductive load)
max. 15 A (resistive load)
Electrical connection: cable gland
Case: base part ABS,
cover PC (transparent)
Protection type: IP 65

Electrical Connection
RED-WHITE opens with reduction in flow
RED-BLUE closes with reduction in flow

Applications
● Monitoring cooling circuits, lubricant circuits
● Dry running protection for pumps
● Prevention of low water levels

Order Numbers for Standard Types

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Standard Switching Ranges</th>
<th>Special Switching Ranges</th>
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<tbody>
<tr>
<td></td>
<td>Model FPS-5000</td>
<td>Model FPS-6000</td>
</tr>
<tr>
<td></td>
<td>GPM Water De-actuating</td>
<td>GPM Water Actuating</td>
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<tr>
<td>1&quot;</td>
<td>2.6 - 8.8</td>
<td>4.4 - 9.3</td>
</tr>
<tr>
<td>1-1/4&quot;</td>
<td>3.5 - 12.3</td>
<td>5.7 - 13.2</td>
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<tr>
<td>1-1/2&quot;</td>
<td>4.8 - 16.3</td>
<td>7.5 - 17.6</td>
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<tr>
<td>2&quot;</td>
<td>9.7 - 25.1</td>
<td>13.7 - 26.9</td>
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<tr>
<td>2-1/2&quot;</td>
<td>11.9 - 28.6</td>
<td>17.6 - 30.8</td>
</tr>
<tr>
<td>3&quot;</td>
<td>18.9 - 47.1</td>
<td>27.3 - 50.2</td>
</tr>
<tr>
<td>4&quot;</td>
<td>50.2 - 122.0</td>
<td>64.7 - 127.7</td>
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<tr>
<td></td>
<td>(26.9 - 76.2)</td>
<td>(35.2 - 81.0)</td>
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<tr>
<td>5&quot;</td>
<td>100.8 - 234.7</td>
<td>125.1 - 244.8</td>
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<tr>
<td></td>
<td>(41.0 - 111.0)</td>
<td>(66.8 - 118.0)</td>
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<tr>
<td>6&quot;</td>
<td>158.1 - 360.0</td>
<td>189.8 - 375.0</td>
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<td>(54.2 - 134.7)</td>
<td>(74.0 - 144.0)</td>
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<tr>
<td>8&quot;</td>
<td>319.7 - 729.6</td>
<td>374.7 - 759.5</td>
</tr>
<tr>
<td></td>
<td>(170.0 - 400.0)</td>
<td>(204.7 - 414.8)</td>
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The values in brackets apply when using the supplied long paddle, which is shortened accordingly for service in 4" to 6" pipes, via the three supplied paddles.

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