KPFS PNEUMATIC FLOAT SWITCH (PATENT PENDING)

OVERVIEW

The Model KPFS uses a float to determine the presence or absence of liquid in a vessel at the process connection. The float arm assembly consists of a float at one end and a magnet at the other. As the liquid level in the vessel rises, the float rises, and the magnet falls. The magnet actuates a second magnet on the other side of the pressure boundary. This second magnet is the reactive component in the snap acting switch that opens and closes the pneumatic valve. Because of the nature of the design, adjustment is rarely, if ever needed. In the event that adjustment is needed, an easy to use adjustment screw is provided. The model KPFS is used to actuate pneumatic dump valves, such as the Kenco Model KDV series dump valve, to control liquids in separators, scrubbers, etc.

The pressure boundary contains no seals; it is a solid stainless steel barrier that passes a magnetic field, but no liquids. It is impossible for the process liquid to enter the switch enclosure through this barrier.

The Model KPFS Pneumatic Float Switch can be ordered to have the pneumatic valve open when it senses a liquid level rising (-LR option) or open when it senses the liquid level falling (-LF option). A manual valve actuator is provided to open the valve manually if desired.

SPECIFICATIONS

- Maximum operating pressure of 2000 psi
- Minimum operating specific gravity of 0.53
- Pneumatic valve pressure range of 30 psi to 75 psi
- All wetted parts including switch body are manufactured from 303/304 Stainless Steel. 316 Stainless Steel wetted parts option available.
- Magnetic Switch actuator operates through a solid stainless steel barrier. There are no seals between the process and the switch compartment that could potentially cause a switch failure.

Note: The KPFS Pneumatic Float Switch requires clean, dry instrument quality air or gas. A pressure regulator with filter is available for improved valve life and trouble free operation.

PRESSURE REGULATOR SPECIFICATIONS

- Maximum inlet pressure of 300 psi.
- Maximum regulated outlet pressure range of 10 to 160 psi.

Note: Although the regulator is capable of regulating the pressure as high as 160 psi, it must not be set any greater than the maximum valve pressure rating of 75 psi. Factory setting on the regulator will be 0 psi. An adjustment knob and pressure gage is provided with the regulator to allow adjustment of the regulator within the 30 psi to 75 psi range required by the pneumatic valve on the model KPFS.

FEATURES

- Optional Filter/Pressure Regulator
  Ensures supplied air or gas is filtered and regulated to improve system life and performance.

- Manual Valve Actuator
  Provides a means to manually open the pneumatic valve.

- Debris Guard
  Factory installed debris guard supplied at no additional charge on all units.
**MODEL KFPS**

**ORDERING SYSTEM**

**Kenco Pneumatic Float Switch**

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Gravity</td>
<td>≥ 0.53</td>
</tr>
<tr>
<td>Wetted Parts</td>
<td>Standard 303/304 Stainless Steel</td>
</tr>
<tr>
<td></td>
<td>Optional 316 Stainless Steel</td>
</tr>
<tr>
<td>Process Connection Size</td>
<td>Standard 2&quot; NPT</td>
</tr>
<tr>
<td>Pneumatic Valve Connection Size</td>
<td>Inlet 1/8&quot; NPT, Outlet 1/8&quot; NPT, Exhaust 1/8&quot; NPT</td>
</tr>
<tr>
<td>Maximum Temperature Rating</td>
<td>257°F</td>
</tr>
<tr>
<td>Process Pressure Range</td>
<td>Vacuum to 2000 psi</td>
</tr>
<tr>
<td>Valve Inlet Pressure Range</td>
<td>30 to 75 psi</td>
</tr>
</tbody>
</table>

**MODEL NUMBER SHOWN: KPFS-2-LR**

- Example Order Number: KPFS-2-LR

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**Model**

KPFS = Kenco Pneumatic Float Switch

**Process Connection**

2 = 2" NPT

**Application**

LR = Level Rising

LF = Level Falling

**Pressure Regulator Option**

No Regulator (Leave Blank)

R = Regulator

**Wetted Parts**

303/304 Stainless Steel (Leave Blank)

S6 = 316 Stainless Steel

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**SPECIFICATIONS**

- MIN. OPERATING S.G.: 0.53
- MAX. WORKING PRESSURE: 2000 PSI
- WETTED MATERIALS: 303/304 STAINLESS STEEL (STANDARD)
  - 316 STAINLESS STEEL (OPTIONAL)
  - (NOTE: ADD -S6 SUFFIX TO MODEL NUMBER FOR 316 OPTION.)

**VALVE OPERATING PARAMETERS**

- MIN. VALVE SUPPLY PRESSURE: 30 PSI
- MAX. VALVE SUPPLY PRESSURE: 75 PSI

**IMPORTANT:** VALVE MUST BE PLumbed WITH

- CLEAN FILTERED, DRY AND REGULATED
- AIR OR INSTRUMENT QUALITY GAS.

**3-WAY, 2-POSITION SNAP ACTING BLOCK AND BLEED PNEUMATIC VALVE**

**LOCKING SET SCREW FOR ADJUSTABLE NEEDLE SEAT.**