PNEUMATIC FLOAT VALVE

DESCRIPTION
The Magnetic Float Valve is an air sensor for detecting liquid level inside a vessel. The float mechanism mounted within the vessel operates a ceramic coated magnet. As the float moves it pivots the magnet. A magnetically actuated sensor on the outside of the solid metal housing reacts to the inner magnet movement. The movement shifts a 3-way air valve.

Both side mounted and top mounted valves are available either as normally closed or normally open.

FEATURES
- Explosion Proof
- No electrical hazard
- For vented or non-vented vessels
- Stainless steel float mechanism
- Side mounting or top mounting selection
- 3-way pneumatic valve
- Actuation indicator on 3 way valve
- Magnetic coupling-float to valve
- Minimum air usage

SPECIFICATIONS
FLOAT AND BODY
Temperature Limit  220°F
Pressure Limit  200 psig
Minimum Specific Gravity  0.5 SG
Wetted Materials
Brass Body; 301 SS, 304 SS, Ceramic
Stainless Steel Body; 303 SS, 301 SS, 304 SS, Ceramic

Installation
Horizontal Valve – For side mounting to vessel, installation arrow must point downward ➣ Vertical Valve – For top mounting.

PNEUMATIC SENSOR
Fluid Media – Clean compressed air or inert gases, filtration < 40 microns
Operating Pressure  30 to 100 psig
Operating Temperature  35° to 140°F
Valve Connections – For 3/32” ID tubing (2.5 mm)
Air Supply  Port #1
Output  Port #2
Vent  Port #3

Valve Operation – The magnetically actuated valve is 3 way. The valve changes position in response to the float movement.
Actuated Flow Path  De-Actuated Flow Path
Port #1 - Port #2  Port #3 - Port #2
(Blue Indicator Extended)  (Blue Indicator Retracted)

Actuation Indicator – 1/16” diameter/Blue Indicator extends outward (approximately 1/16” stroke) when port #1 is passing to port #2.

Air Flow – No continuous air flow usage.
Air Valve Orifice – .080” diameter

Materials of Construction
- Brackets – Anodized Aluminum
- Switch Body – Plastic
- Connection Barbs – Brass

Deadband – Change in liquid level between valve actuation and deactuation.
- Horizontal models – approximately 1/2”
- Vertical models – approximately 1/4”

SYMBOLS
Float Valve Normally Closed

Normally closed float valves are “off” (no output) when float is low. Air signal is “on” when float is raised.

Float Valve Normally Open

Normally open float valves are “on” when float is low. Air signal is “off” when float is raised.

Horizontal float valve for side mounting to vessel. Float operates air valve on outside of vessel. Normally closed or normally open.

Float mechanism is contained inside a solid metal body. The air valve is located outside the metal body and is magnetically actuated.

Vertical float valve is mounted on top side of closed or vented vessels. Normally closed or normally open versions available.

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PNEUMATIC FLOAT VALVE

HORIZONTAL FLOAT VALVE – SIDE MOUNTING

Normally Closed – Signal On Rising Level

VERTICAL FLOAT VALVE – TOP MOUNTING

Normally Closed – Signal On Rising Level

<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Body</th>
<th>Installation</th>
<th>State</th>
<th>Float</th>
<th>Max. Float Pressure</th>
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<tbody>
<tr>
<td>OKC-1536-1</td>
<td>Brass</td>
<td>Side Mounting</td>
<td>N.C.</td>
<td>Stainless Steel</td>
<td>200 psig</td>
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<td>N.C.</td>
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<td>Stainless Steel</td>
<td>Top Mounting</td>
<td>N.C.</td>
<td>Stainless Steel</td>
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<td>OKC-2250-1</td>
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<td>OKC-2250-2</td>
<td>Stainless Steel</td>
<td>Side Mounting</td>
<td>N.O.</td>
<td>Stainless Steel</td>
<td>200 psig</td>
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<tr>
<td>OKC-2271-1</td>
<td>Brass</td>
<td>Top Mounting</td>
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<td>Stainless Steel</td>
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<td>OKC-2271-2</td>
<td>Stainless Steel</td>
<td>Top Mounting</td>
<td>N.O.</td>
<td>Stainless Steel</td>
<td>200 psig</td>
</tr>
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</table>

HORIZONTAL FLOAT VALVE – SIDE MOUNTING

Normally Open – Signal On Falling Level

VERTICAL FLOAT VALVE – TOP MOUNTING

Normally Open – Signal On Falling Level

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LEVEL INDICATOR AND CONTROL APPLICATIONS

HIGH LEVEL INDICATOR

Normally closed float valve (side or top mounted). Output signal (port 2) of level sensor is "on" when level is high. Output can actuate an indicator, pressure switch, air pilot power valve, etc. Can be used with High Level Indicator panel shown on page 4.

LOW LEVEL INDICATOR

Normally open float valve (side or top mounted). Output signal (port 2) of level sensor is "on" when level is low. Output can actuate an indicator, pressure switch, air pilot power valve, etc. Can be used with Low Level Indicator panel shown on page 4.

LEVEL CONTROL – WIDEBAND

Two level sensors required; one normally closed for high level, one normally open for low level. The control automatically maintains the level between the location of the two sensors. Minimum "high/low" is approximately two inches. Maximum "high/low" is set by the location of the two sensors. Can be used with Wideband Level Control panel on page 4.

LEVEL CONTROL – NARROWBAND

One normally open float valve provides the control for narrowband level control. Level is maintained within approximately 1/2". Output can actuate an air operated power valve for direct fill, or for control of an air operated pump through an air operated power valve. The output can be used with the Narrowband Level Control panel shown on page 4.

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HIGH LEVEL INDICATOR

This panel is used for indication of level only. When a normally closed float valve is actuated by high liquid level the indicator shows "red". The indicator shows green when the float valve is not actuated.

Part No. OKC-2289F Includes inlet filter, regulator and gage assembly.
Part No. OKC-2289 Filter, regulator and gage not included.

Use the high level indicator panel with a normally closed float valve.
OKC-1536-1 OKC-1570-1
OKC-1536-2 OKC-1570-2

LOW LEVEL INDICATOR

This panel is used for indication of level only. When a normally open float valve is deactuated by low liquid level the indicator shows "red". The indicator shows green when the float valve is actuated by the liquid level.

Part No. OKC-2290F Includes inlet filter, regulator and gage assembly.
Part No. OKC-2290 Filter, regulator and gage not included.

Use the low level indicator panel with a normally open float valve.
OKC-2250-1 OKC-2271-1
OKC-2250-2 OKC-2271-2

SPECIFICATIONS

Operation – A pneumatic indicator panel
Box Dimensions – 4-1/2” x 2-7/8” x 2-5/8”
Inlet Air Pressure to Regulator – 50-125 psig
Normal Pressure Setting – 50-100 psig
Pneumatic Indicator – 1” diameter red/green
Manual Control – OFF/ON Toggle Valve
Air Filtration – Air should be dry and filtered to 5 microns

FOR OKC-3171F

NARROWBAND LEVEL CONTROL

This panel is used for control of liquid level over the deadband of the pneumatic float valve (approximately 1/4” to 1/2”). The control panel pilots a fill or drain valve that operates a pump. A normally open float valve is used. The output control is "on" (indicator red) when the level is low and is "off" when the level is high (indicator green).

Part No. OKC-2292F Includes inlet filter, regulator and gage assembly.
Part No. OKC-2292 Filter, regulator and gage not included.

The output signal can also be used as a remote indicator signal to operate a visual indicator or a sonic alarm. Use as follows:
Low Level Alarm – use a normally open float valve
High Level Alarm – use a normally closed float valve
<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Connector</td>
<td>OKQ2H03-32</td>
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<tr>
<td>Male Connector</td>
<td>OKQ2H03-34S</td>
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<tr>
<td>Male Elbow</td>
<td>OKQ2L03-32</td>
</tr>
<tr>
<td>Male Elbow</td>
<td>OKQ2L03-34S</td>
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<td>Bulkhead Union</td>
<td>OKQ2E03-00</td>
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<td>Union Tee</td>
<td>OKQ2T03-00</td>
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<td>Tubing</td>
<td>OTU0425G-20</td>
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<tr>
<td>Cable Clamp Bracket</td>
<td>OKC-1532</td>
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<tr>
<td>Replacement Valve</td>
<td>OKC-1587</td>
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