

CAUTION

Prior to installing, the instructions provided herein should be completely reviewed and understood before operating or repairing this equipment. All CAUTION and WARNING notes must be strictly observed to prevent personal injury or equipment damage.

Description

The side mount and back mount Float Operated Controllers are designed for use in liquid level and liquid/liquid interface control applications. Both provide either a throttle (modulating) or snap (on/off) pneumatic output and can be set to operate in a direct (increasing liquid level output signal) or indirect mode (increasing liquid level decreasing output signal).

The Float Operated Controllers are equipped with a horizontal or vertical displacer. The side mounted is reversible for right hand or left hand installation. The back mount is center back mounted. Both models are standard with a 1/4" NPT tapped vent. No gas is released into the case. Both models include a 40 micron filter located just downstream of the instrument gas inlet port.

Only use Kimray replacement parts.

Installation

NPT Connection: Apply TFE tape or pipe compound to the male threads of the threaded body, or use appropriate gaskets for a flanged body. When installing a threaded body, tighten sufficiently to seal the threads. Use a wrench on the flats of the body. Do not use the pilot case to tighten the connection. Make sure the pilot case is vertical when finished.

Flanged Connection: Flanged controllers are available on request. Remove the masking sticker from the raised face. Use a suitable gasket between the body and the vessel connection flange.

Remove the plastic plugs from the 1/4" NPT openings. 1/4" or 3/8" tubing not provided must be installed.

1. SUPP - Connect to a source of clean, dry instrument gas.
2. OUTPUT - Connect to the diaphragm housing on the control valve being operated.
3. VENT - Connect to a preferred location for vented supply gas, or to a vapor recovery system.

Start-Up

Throttle- (No liquid on displacer)

Pressure Opening Valve: At 0 psig turn adjusting knob counter clockwise to produce 10 psig, then turn clockwise one turn to 0 psig.

Pressure Closing Valve: At 0 psig turn adjusting knob clockwise to produce 20 to 30 psig.

Snap- (No liquid on displacer)

Pressure Opening Valve: At 0 psig turn adjusting knob clockwise to snap ON, then turn clockwise two turns to 0 psig.

Pressure Closing Valve: At 20 to 30 psig turn adjusting knob counter clockwise to snap OFF, then turn clockwise two turns from 20 to 30 psig.

Interface:

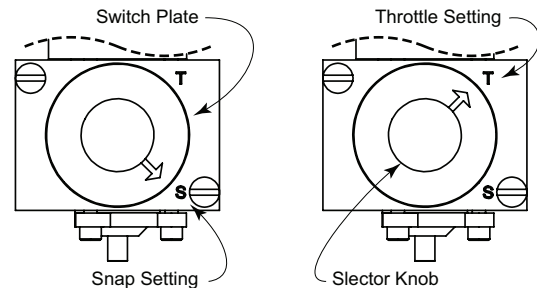
Cover displacers with the lighter fluid. Heavier fluid must be below the displacer. Then adjust same as above.

CAUTION

When ordered, the Float Operated Controller configuration and construction materials were selected to meet specific pressure, temperature, pressure drop and fluid conditions. Since some body/trim material combinations are limited in their pressure drop and temperature ranges, do not subject the Float Operated Controller to any other conditions without first contacting the Kimray Inc, sales office or a sales / applications representative.

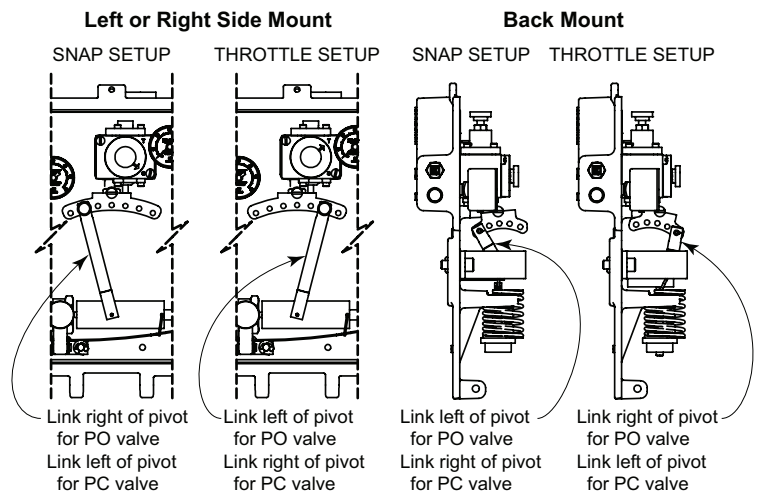
Changing Mode

The mode is selected with the switch plate. After shutting off and venting instrument gas pressure, loosen the selector knob approximately one half turn. Then turn the switch plate to "T" for throttle mode, or "S" for snap mode. Then tighten selector knob.



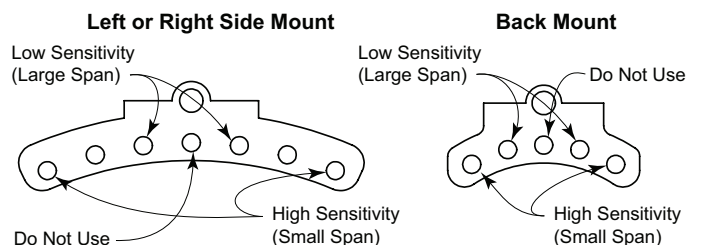
Changing Action

1. Refer to the following diagram to determine the proper orientation of parts for the desired action direct or indirect.
2. Pull out the link knob, then move it to the desired setting and press into hole.



Snap Operation Span Adjustment

1. Refer to the following diagram to determine the proper orientation of parts for the desired span.
2. Pull out the link knob, move to the desired setting and press into hole.



FLOAT OPERATED LEVEL CONTROLLERS

QUICK START GUIDE



Start-up and Test

With the installation completed and appropriate relief and check valves installed and set, slowly open the upstream and downstream shutoff valves. In order to test the function of the valve, allow only a small amount of upstream pressure to flow through the upstream shutoff valve. Check for proper valve operation by cycling the span adjustment arm several times.

Maintenance

Maintenance should be performed on a regular basis. An initial inspection interval of 6 months is recommended. Depending on the service conditions of the valve, the inspection interval may be decreased or increased.


The controller can be repaired without being removed from the piping.

Only use genuine Kimray replacement parts.


Repair kits and detailed repair instructions are available for each valve.

Visit www.kimray.com or contact your Kimray authorized distributor for additional product information and / or literature.

WARNING

 If a level controller is used in a hazardous or flammable fluid service, personal injury and property damage could occur due to fire or explosion of vented gas that may have accumulated. To prevent such injury or damage, install piping or tubing to vent the fluid to a safe, well-ventilated area or containment vessel. When venting a hazardous gas, the piping or tubing should be located far enough away from any buildings or windows so as not to create further hazard. The vent opening should be protected against anything which could obstruct it, or it should be connected to exhaust tubing or tubing connected to a vapor recovery system.

CAUTION

 For liquids, with specific gravity less than 1.0 it is best to set the link for the most sensitive response. This will result in less span. Calling for greater spans with low specific gravity can cause span to exceed the length of the displacer, resulting in loss of control.



Periodically check the vent opening or the end of the remote vent pipe, if one is required. Be certain they are clear. If a vent should become blocked the pilot could lose control.

CAUTION



To avoid personal injury caused by a sudden release of pressure, shut off the instrument gas supply pressure and bleed pressure from the supply lines before performing any change between snap and throttle mode.

NOTE



Do not pick up or carry the controller by using the displacer arm as a handle.

Inspection Schedule

Body	Under normal conditions, the body will last for years. Severe conditions will require inspection more frequently.
* Under severe operating conditions this maintenance schedule will not be adequate and a more frequent time schedule may be required.	

Trouble Shooting

Problem	Possible Cause(s)	Possible Solution
Pilot bleeds gas continuously	The pilot plug seat may be dirty. Diaphragms hardened with age. Bonnet may be unevenly tightened	Clean pilot plug seat. Replace Diaphragms. Evenly tighten the screws which hold the bonnet on.

WARNING

Before beginning installation:

- Read and follow instructions.
- Make sure the valve cannot operate during installation.

Do not exceed the maximum supply pressure specified on the valve nameplate.

Never tighten any fitting or the main connections to the valve while there is pressure on the line.

WARNING

Before any service, be certain that the valve is fully isolated and that all pressure upstream and downstream has been relieved. Use bypass valves or fully shut off the process.

Be sure that any operating or instrument gas lines have been disconnected.

Never stand directly in front of or over a valve when the system is pressurized. The valve could suddenly open, blowing debris into the person's face and eyes.

WARNING

A leaking valve is an indication that service is required. Failure to take valve out of service immediately may cause a hazardous condition.

NOTE

If conditions indicate the possibility of backward flow you may wish to install check valves. Never assume that a check valve is fully blocking the downstream line.

For questions or comments, contact your local Kimray authorized distributor, or visit www.kimray.com.

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All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.