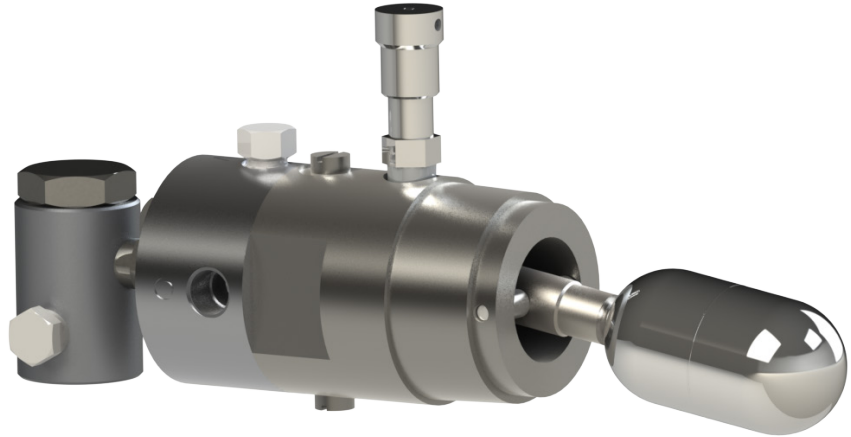


### CONTENTS

	PAGE
Introduction	1
Scope	1
Description	1
Specification	1
PLS Installation	2



**Pneumatic Level Switch**

### INTRODUCTION

#### 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.

#### Scope

This installation manual includes instructions and maintenance information for the 2" Kimray pneumatic level switch.

Do not install, operate, or maintain a pneumatic level switch without being fully trained and qualified with Kimray installation and maintenance manual. To avoid personal injury or property damage, it is important to carefully read, understand, and follow all the contents of this manual, including all safety cautions and warnings. If you have any questions about these instructions, contact your Kimray applications support group before proceeding.

#### Description

The float actuated snap-acting switch controls pneumatic signal to open and close the dump valve. The level switch consists of a float on one end and a magnet at the other end. The float is used to determine the presence or absence of liquid in a vessel at the switch connection. As the liquid level in the vessel rises, the float rises, and the magnet falls.

### Specification

Table 1 - General Specifications	
Description:	Intermittent, snap-acting
Working Pressure:	2,000 psig
Process Temperature:	-20° F to +350° F
Specific Gravity:	0.5 Minimum
Material:	316 SS Body
Flow Rate:	420 SCFH @ 30 psi
Connection Size:	2" NPT Standard
Connection Type:	1/4" NPT
Supply Pressure:	15 - 75 psig

#### Note

Pneumatic media devices require clean, dry instrument quality air or gas.

#### CAUTION

When ordered, the pneumatic level switch 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 pneumatic level switch to any other conditions without first contacting the Kimray Inc, sales office or a sales / applications representative

#### WARNING

Do not exceed the maximum supply pressure specified on the switch nameplate. Under no circumstances should the pneumatic switch supply pressure ever exceed 75 psig.

#### Before beginning installation of the pneumatic level switch:

- Read and follow instructions.
- Follow all safety warnings of the switch manufacturer.
- Make sure the switch cannot operate during installation.
- Observe all pressure, ratings and requirements for the devices and the operating environment.
- Make sure all pressure has been removed from the vessel before opening any connections.

### PLS Installation

Before installing the pneumatic level switch (PLS), inspect it for shipment damage and for foreign material that may have collected during shipment.

To prevent galling or seizing use a nickel impregnated PTFE thread sealant tape or equivalent.

1. Verify all pressure connections are tight before pressurizing the system.
2. Make certain the float and extension rod are tight.
3. Clean male and female threads thoroughly.
4. Wrap the tape around the male thread, making three complete wraps. Keep the tape under tension as you are wrapping in the direction of the thread so the tape molds itself into the root of the thread. Make sure that the tape does not overlap the end of the fitting.
5. Install on vessel, connect pressure lines.
6. Depending upon orientation, the manual override could be located on either the top or bottom.
7. Test to ensure functionality, run operation.

#### Note

*For poor quality or damaged threads that are hard to seal, such as parallel threads or threads on fittings subject to vibration, more than three wraps may be necessary.*

#### Note

*Use flats for tightening and loosening only  
DO NOT use pipe wrench on body*

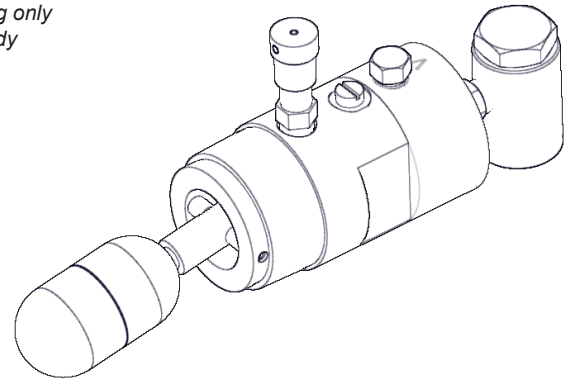


Figure 1

#### CAUTION

*Determine that the float travel is not obstructed inside the pipe, etc.*

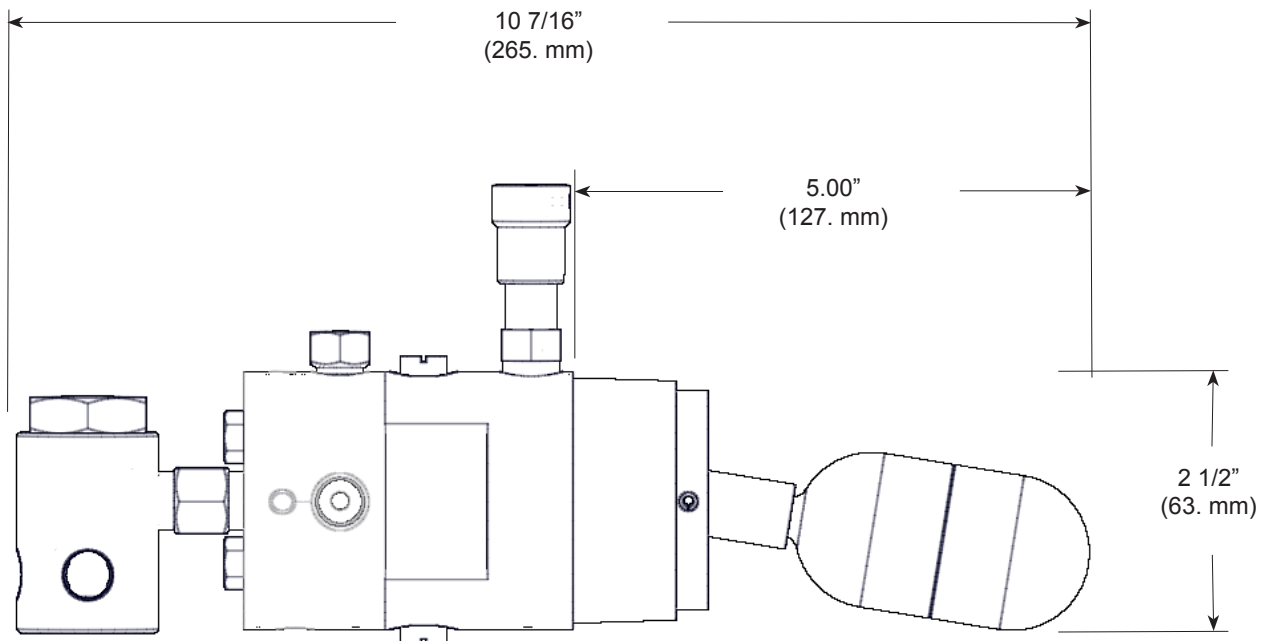


Figure 2

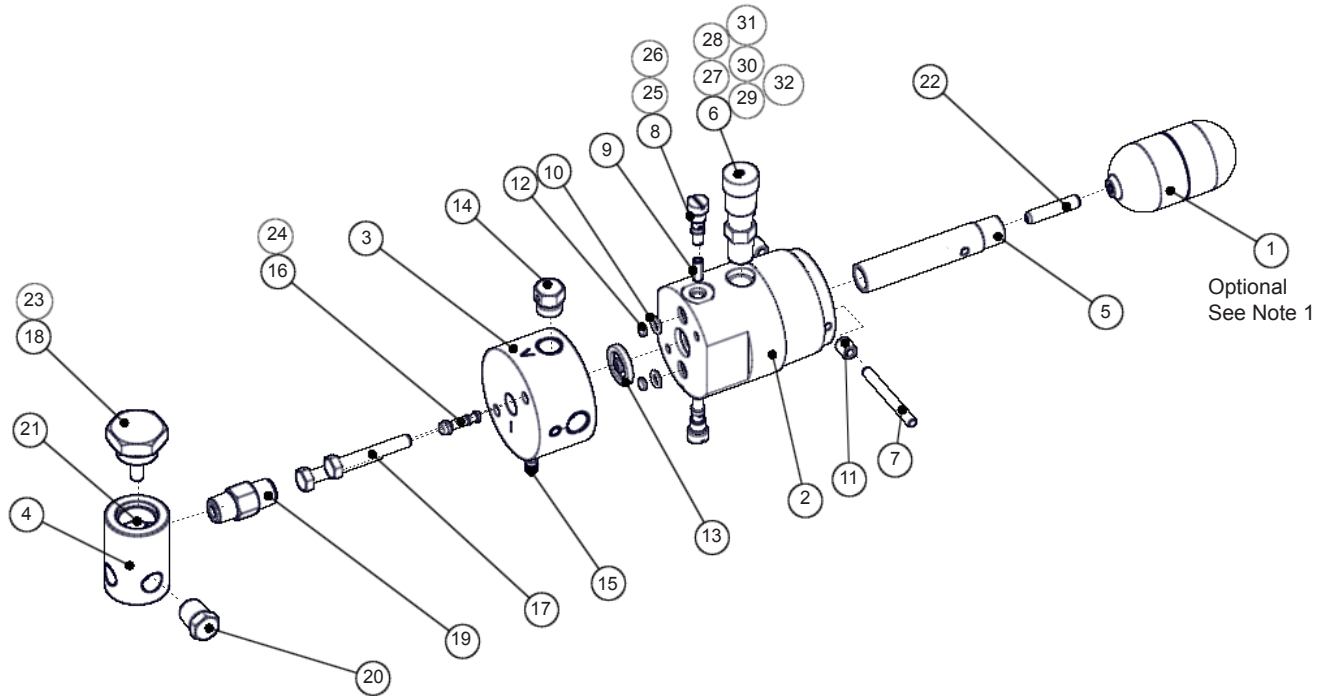


Figure 3

Item	Qty	Part No. / Description	Note
1	1	<b>3216</b> Float-Elec. Level Switch	1
2	1	<b>6981</b> Housing CUA	
3	1	<b>6984</b> Pilot Body CUA	
4	1	<b>616</b> Body F30 Filter	
5	1	<b>7017S6</b> Float Lever CUA	
6	1	<b>5417</b> Push Cap HLS	
7	1	<b>7020</b> 3/16" 2" Roll Pin 18-8SS	
8	2	<b>6990</b> Check Valve Seat CUA	
9	1	<b>6996</b> Check Ball CUA	
10	2	<b>638V</b> O-Ring Viton	
11	2	<b>6991</b> Pne Level Switch Spacer	
12	2	<b>7012</b> Disk Filter CUA	
13	1	<b>6994V</b> Diaphragm Viton CUA	
14	1	<b>147</b> Breather Plug 1/4" NPT	
15	1	<b>7022</b> 1/4" OD Expander Plug	
16	1	<b>6986</b> Valve Stem CUA	
17	2	<b>7024</b> Screw, Stainless	
18	1	<b>617</b> Cap F30 Filter	
19	1	<b>648</b> Nipple 1/4" NPT HVY	
20	1	<b>699</b> Pipe Plug 1/4" Hex HD	
21	6	<b>619</b> Filter Screen 1/4" 12F	
22	1	<b>6851</b> Set Screw Sckt HD Cup	

Item	Qty	Part No. / Description	Note
23	1	<b>155V</b> O-Ring Viton CUA	
24	1	<b>7016V</b> O-Ring Viton CUA	
25	2	<b>7015V</b> O-Ring Viton CUA	
26	2	<b>7019V</b> O-Ring Viton CUA	
27	1	<b>5410V</b> O-Ring Viton CUA	
28	1	<b>5426</b> Set Screw Sckt HD Cup	
29	1	<b>5429</b> Spring HLS	
30	1	<b>5419</b> Stem Elec Level Switch	
31	1	<b>5418</b> Override Fitting HLS	
32	1	<b>1479A</b> Name, WP & Serial No. Tag	2
33	2	<b>5236</b> 1/4" NPT Thread Pull Ring	2
34	2	<b>602</b> Screw 2 x 1/8" Type U Drive	2

**NOTES:**

1. w/3" Extension CUAL3 or w/6" Extension CUAL6
2. Items not shown on drawing - 32, 33, 34.



# Pneumatic Level Switch

Model 2200 PLS

## Installation and Maintenance

### Related Publications:

See Product Bulletin - PB0009

See Catalog Page C1:08.1

Kimray is an ISO 9001- certified manufacturer.  
Kimray quality assurance process maintains strict controls  
of materials and the certification of parts used in Kimray pneumatic level switch.