

# ***INSTRUCTION MANUAL***

**L E V E L   C O N T R O L   S W I T C H E S**

LINC 282 & 282SC  
SERIES

# **INSTRUCTION MANUAL**

## **LEVEL CONTROL SWITCHES**

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# INSTRUCTION MANUAL

## T A B L E O F C O N T E N T S

<b>Contents – 282 &amp; 282SC Series Pneumatic Level Controls</b> .....	<b>Page</b>
General Specifications .....	3
Ordering Chart .....	3
Scope Of This Manual .....	4
Installation .....	4
Product Description .....	4
Operation .....	4
Float and Float Arm .....	5
Pneumatic Switch Cartridge .....	5
Features .....	5
 <b>Assembly Drawings &amp; Parts Lists</b>	
Figure 1, 282-11 Level Switch .....	6
282-11 Level Switch Parts List .....	6
Figure 2, 282-12 Level Switch .....	7
282-11 Level Switch Parts List .....	7
Figure 3, 282-13 Level Switch .....	8
282-13 Level Switch Parts List .....	8
Figure 4, 282-33 Level Switch .....	9
282-33 Level Switch Parts List .....	9
Figure 5, 282-39 Level Switch .....	10
282-39 Level Switch Parts List .....	10
Figure 6, 282-73 Level Switch .....	11
282-73 Level Switch Parts List .....	11
Figure 7, 282-79 Level Switch .....	12
282-79 Level Switch Parts List .....	12
Figure 8, 282-SC-01 Level Switch .....	13
282-SC-01 Level Switch Parts List .....	13
Figure 9, 282-SC-02 Level Switch .....	14
282-SC-02 Level Switch Parts List .....	14
Figure 10, 282SC-03 Level Switch .....	15
282-SC-03 Level Switch Parts List .....	15
Figure 11, 282-2 Manual Override & 282-6, 8 Extended Body .....	16
282-2 Manual Override & 282-6, 8 Extended Body Parts List .....	16
Standard Unit Options .....	17
Optional Configurations .....	18

# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

<b>General Specifications: LINC 282 &amp; 282 SC Series Pneumatic Level Controls</b>	
<b>Output:</b>	Non-bleed, snap-acting
<b>Pressure:</b>	Working: 1,500 psi std., available to 5,000 psi, (1,500 psi maximum with the Manual Override option) Supply: 30, 60, 100 psi std. Output: 0-30, 0-60, 0-100 psi
<b>Temperature:</b>	-40°F to +450°F
<b>Specific Gravity:</b>	0.5 minimum standard , interface 0.1 differential minimum
<b>Materials:</b>	316 stainless steel standard, other austenitic metals and plastics available
<b>Flow Rate:</b>	40 SCFH at 30 psi, with 30 psi cartridge
<b>Connections:</b>	Process: 2" NPT standard, available 1 1/2" NPT, 3" flanged or larger, and externally caged Supply: 1/4" NPT Output: 1/4" NPT

### Ordering Chart:

	<b>Series:</b>	
	282	- Pneumatic level control
	282SC	- Externally caged pneumatic level control, ring bolted (available on body style "0" only)
	<b>Body Style:</b>	
	0	- Ring bolted, 1,500 psi WP standard, 3,000 psi WP available only in the 282SC Model
	1	- Standard, 2" NPT
	2	- Standard, 2" NPT with manual override
	3	- Extended <sup>1</sup> : 2" NPT, vertical displacer
	6	- Extended <sup>1</sup> : 2" NPT, vertical displacer, manual override
	7	- Extended <sup>1</sup> : 2" NPT, horizontal displacer
	8	- Extended <sup>1</sup> : 2" NPT, horizontal displacer, manual override
	<b>Type:</b>	
	1	- Standard
	2	- High pressure, 5,000 psi polypropylene displacer, temperature + 180° max, specific gravity 0.6 min.
	3	- Interface, 5,000 psi polypropylene displacer, temperature + 180° max, upper fluid less than : .870 specific gravity: lower fluid more than .970 specific gravity.
4	- Other gravities for interface , specify gravities of fluids (upper & lower)	
9	- Displacer, 5,000 psi polypropylene displacer, temperature + 180° max, specific gravity 0.5 min.	
<b>Supply Pressure:</b>		
1	- Maximum, 30 psi, flow rate at 30 psi, 40 scfh	
2	- Maximum, 60 psi, flow rate at 30 psi, 25 scfh	
3	- Maximum, 100 psi, flow rate at 30 psi, 15 scfh	
<b>Other<sup>2</sup>:</b>		
0	- None	
2	- Annulus plug	
5	- This number means special: specify your requirements. i.e. 3" flanged 150# RF	
<b>Order Number:</b>		
( )	- Factory will assign an option number based on specified requirements	

<sup>1</sup> Body styles 3, 6, 7, 8 available only on Type 9.

<sup>2</sup> If no further requirements are desired , omit "Other" option codes from the part number.

Example: 282-11-10

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**Example: LINC-282-11-15 pneumatic level control**

# **INSTRUCTION MANUAL**

## **L E V E L   C O N T R O L   S W I T C H E S**

### **Scope Of This Manual:**

*This manual describes and provides instructions and parts list for the LINC 282 and LINC 282SC Series Pneumatic Level Control.*

### **Installation:**

*Before installing the level control, inspect the unit for any damage. Also check the clearance in the piping for operation. The float on the standard unit (282-11) must have 2 3/4" minimum clearance for the level control to function properly. Check drawing on the following pages to determine the proper clearance required on other units. The float arm must swing freely without binding. Use an acceptable thread compound dope when installing the unit to the vessel to avoid thread galling.*

*For direct acting, (increased output on the level increase) connect the supply gas to port "A", port "B" is exhaust. Supply gas must be filtered and not exceed specified limit of cartridge. Air is the recommended supply; however, any dry filtered gas may be used. Connect the out port, stamped "C", to the unit to be controlled.*

*For indirect acting, (decreased output on level*

*increase) connect supply gas to the port "B". Port "A" is exhaust.*

*If a larger volumetric output or faster speed of response is required, a pilot or booster relay should be installed in the output line. The exhaust may be piped away if desired. The manual override feature allows the unit to be tested while installed in a vessel. To operate the manual override, push down on the knob. The output pressure should go to the full supply pressure or to 0 depending on whether the control is connected in the direct acting or indirect acting mode. The knob is spring loaded and will return to the normal position when released.*

**Note:** *See pages at the back of this manual for optional installation configurations.*

### **Product Description:**

*Used as a level control or a high or low level alarm. The pneumatic output can be used to operate valves, sound alarms or perform any other desired pneumatic function. Any liquid or liquid or liquid interface can be monitored.*

### **Operation:**

*As the float is moved by varying liquid height, a magnet in the float arm is moved. The magnet operates the 282's three-way two-position switch cartridge thru a magnetic linkage only. The output is snap-acting from 0 psi to full supply pressure or conversely on float movement.*

*The arm containing the magnet also acts as a counterweight for the float.*

*As a result, the float is small and can operate in liquids with specific gravity of 0.5 or higher. This small float permits economical installation where other types of controls would be cost prohibitive.*

*Direct acting (increase in liquid level increases output) or indirect acting (increase in liquid level decreases output) is selected simply by changing the supply pressure and exhaust connections.*

*The SC Series is designed to eliminate the threaded control connection in mounting with the use of a bolted ring per API recommended practice RP14E. The external cage allows for the installation of the control at any elevation.*

# **INSTRUCTION MANUAL**

## **LEVEL CONTROL SWITCHES**

### **Float and Float Arm:**

The float arm must swing freely. Solvent cleaning of the float arm chamber may be required in control is used in viscous or dirty liquids. If the float is collapsed or perforated, unscrew the float from the float arm and replace with a new float. Use an anaerobic adhesive to secure the float to the float arm. To remove the float arm assembly drive out the pivot pin using a 1/8" punch. Be careful not to lose the float arm spacers and be sure they are in place when reinstalling the arm.

### **Pneumatic Switch Cartridge:**

To service the switch cartridge, disconnect the supply and vent piping from control. Loosen and remove both port adapters. Remove the switch cartridge from the body. Do not attempt to disassemble switch cartridge. The switch cartridge may be solvent cleaned only. Reinstall the switch cartridge using new o-rings. Reinstall both port adapters. Tighten securely. Reinstall the piping. If the switch cartridge does not function properly after cleaning, replace the switch cartridge.

### **Features:**

#### **Easy to Repair**

- Repair on-site in 20 minutes with the Quick-change pneumatic cartridge

#### **Easy to Field Test**

- The manual override option enables mechanical and pneumatic function testing while installed.

### **No Leaks**

- Environmentally isolated design keeps operational fluid away from supply gas.

### **Lower Operating Cost**

- Quick-change replacement parts.
- Non-bleed output saves gas.

### **Lower Inventory**

- Direct or indirect acting by changing the supply and exhaust ports.
- Use one 282 on either high or low level activation

### **Safe**

- Pneumatically activation in an environmentally-isolated design

### **Corrosion Resistant**

- Standard 316 Stainless Steel wetted parts for corrosion resistance.

### **Optional Corrosion Resistant Materials**

- Monel, Kynar, Teflon, Teflon Coated, Hastelloy C, PVC, Polypropylene, and Alloy 20 optional Corrosion Resistant Materials available.

### **Hi & Low Pressure**

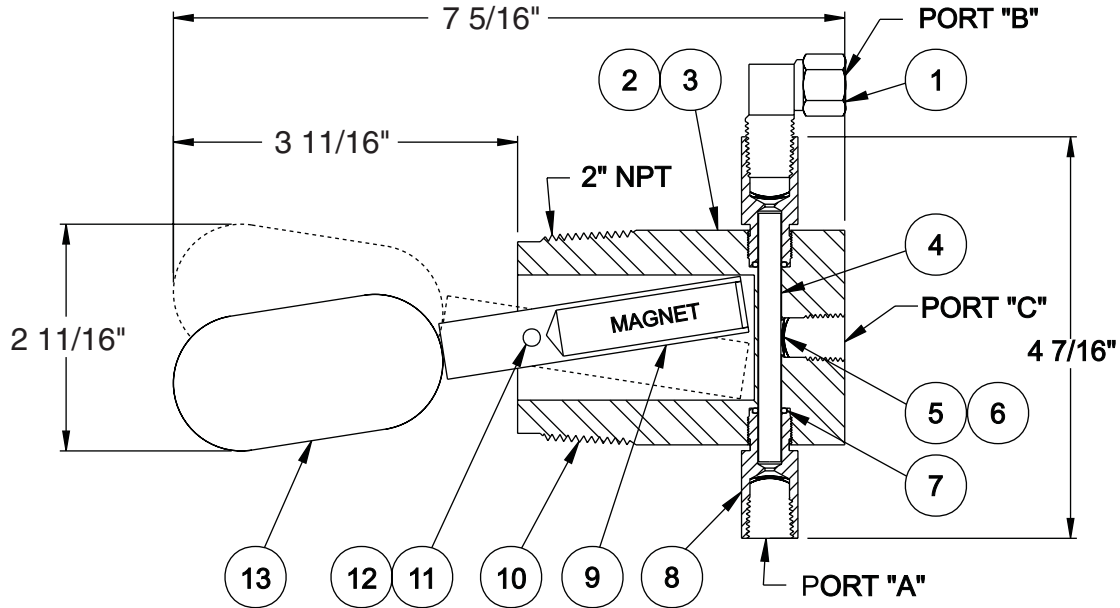
#### **Applications**

- Available with Stainless Steel and Polypropylene displacer options for various pressures.

# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 1, LINC 282-11 Level Switch



### The LINC 282-11 Pneumatic Series Parts List.

Item	Part #	Description	Material	Qty
1	.23339	.Vent Assembly	.Brass	.1
2	.10998	.Nameplate	.316 ss	.1
3	.10324	.Drive Screw	.18-8 ss	.2
4	.See Chart Below	.Switch Cartridge		
5	.11006	.Filter	.18-8 ss	.3
6	.10403	.Retaining Screen	.18-8 ss	.3
7	.10108	.O-Ring	.Fluorocarbon	.2
8	.22451	.Port Adapter	.303 ss	.2
9	.22068	.Float/Magnet Arm	.316 ss	.1
10	.30816	.Body	.316 ss	.1
11	.20334	.Pin	.316 ss	.1
12	.22066	.Spacer	.316 ss	.2
13	.13217	.Float/Displacer	.316 ss	.1

### Pneumatic Switch Cartridge

Part #	Model Option	Description
22935	..-1	..0-30 PSI Switch
22936	..-2	..0-60 PSI Switch
22899	..-3	..0-100 PSI Switch

All 282 Ports are 1/4" NPT Female

For Direct Acting Operation:  
 Connect Supply to Port "A"  
 Connect Output to Port "C"  
 Port "B" is Vent

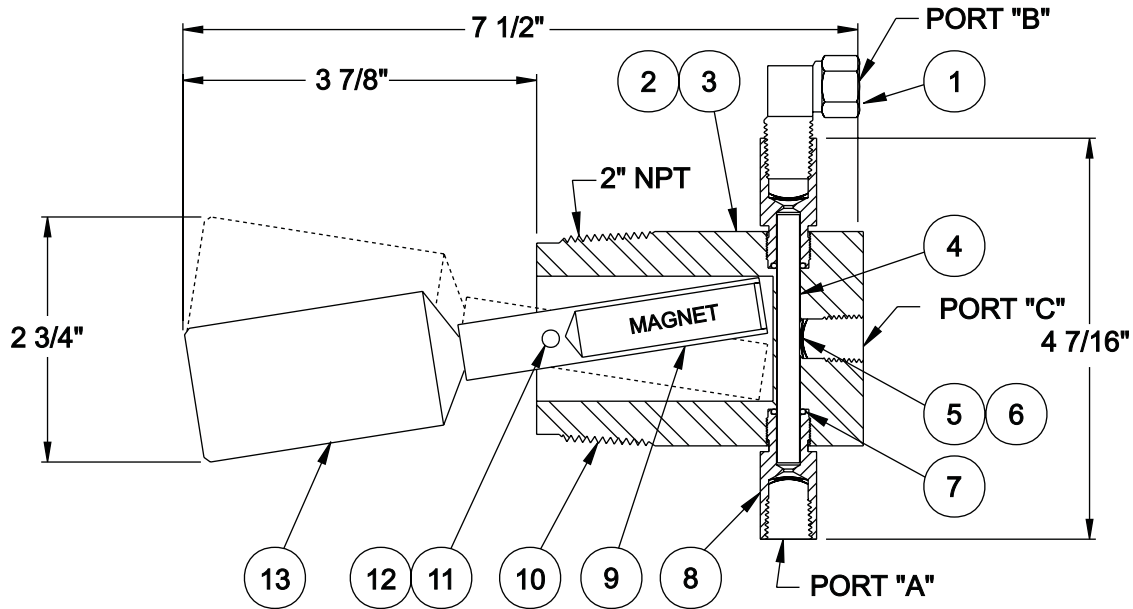
For Indirect Acting Operation:  
 Connect Supply to Port "B"  
 Connect Output to Port "C"  
 Port "A" is Vent



# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 2, LINC 282-12 Level Switch



### The LINC 282-12 Pneumatic Series Parts List.

Item	Part #	Description	Material	Qty
1	.23339	.Vent Assembly	.Brass	.1
2	.10998	.Nameplate	.316 ss	.1
3	.10324	.Drive Screw	.18-8 ss	.2
4	.See Chart Below	.Switch Cartridge		
5	.11006	.Filter	.18-8 ss	.3
6	.10403	.Retaining Screen	.18-8 ss	.3
7	.10108	.O-Ring	.Fluorocarbon	.2
8	.22451	.Port Adapter	.303 ss	.2
9	.22068	.Float/Magnet Arm	.316 ss	.1
10	.30816	.Body	.316 ss	.1
11	.20334	.Pin	.316 ss	.1
12	.22066	.Spacer	.316 ss	.2
13	.20892	.Float/Displacer	.Polypropylene	.1

### Pneumatic Switch Cartridge

Part #	Model Option	Description
22935	..-1	..0-30 PSI Switch
22936	..-2	..0-60 PSI Switch
22899	..-3	..0-100 PSI Switch

All 282 Ports are 1/4" NPT Female

For Direct Acting Operation:  
 Connect Supply to Port "A"  
 Connect Output to Port "C"  
 Port "B" is Vent

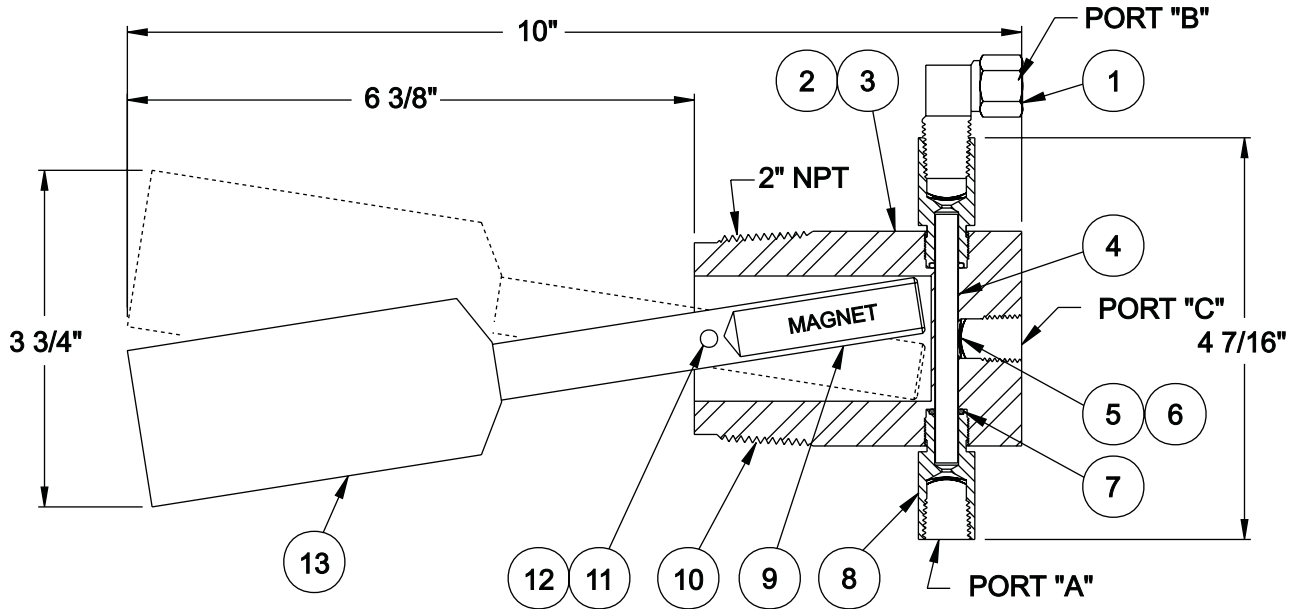
For Indirect Acting Operation:  
 Connect Supply to Port "B"  
 Connect Output to Port "C"  
 Port "A" is Vent



# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 3, LINC 282-13 Level Switch



### The LINC 282-13 Pneumatic Series Parts List.

Item	Part #	Description	Material	Qty
1	.23339	.Vent Assembly	.Brass	.1
2	.10998	.Nameplate	.316 ss	.1
3	.10324	.Drive Screw	.18-8 ss	.2
4	.See Chart Below	.Switch Cartridge		
5	.11006	.Filter	.18-8 ss	.3
6	.10403	.Retaining Screen	.18-8 ss	.3
7	.10108	.O-Ring	.Fluorocarbon	.2
8	.22451	.Port Adapter	.303 ss	.2
9	.22166	.Float/Magnet Arm	.316 ss	.1
10	.30816	.Body	.316 ss	.1
11	.20334	.Pin	.316 ss	.1
12	.22066	.Spacer	.316 ss	.2
13	.20898	.Float/Displacer	.Polypropylene	.1

### Pneumatic Switch Cartridge

Part #	Model Option	Description
22935	..-1	..0-30 PSI Switch
22936	..-2	..0-60 PSI Switch
22899	..-3	..0-100 PSI Switch

All 282 Ports are 1/4" NPT Female

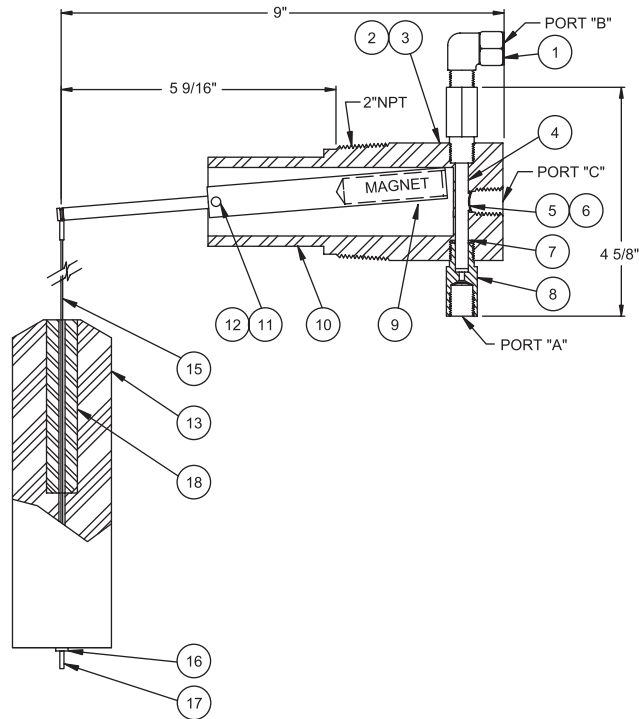
For Direct Acting Operation:  
 Connect Supply to Port "A"  
 Connect Output to Port "C"  
 Port "B" is Vent

For Indirect Acting Operation:  
 Connect Supply to Port "B"  
 Connect Output to Port "C"  
 Port "A" is Vent

# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 4, LINC 282-33 Level Switch



### The LINC 282-33 Pneumatic Series Parts List.

Item	Part #	Description	Material	Qty
1	.23339	.Vent Assembly	.Brass	.1
2	.10998	.Nameplate	.316 ss	.1
3	.10324	.Drive Screw	.18-8 ss	.2
4	.See Chart Below	.Switch Cartridge		
5	.11006	.Filter	.18-8 ss	.3
6	.10403	.Retaining Screen	.18-8 ss	.3
7	.10108	.O-Ring	.Fluorocarbon	.2
8	.22451	.Port Adapter	.303 ss	.2
9	.31074	.Float/Magnet Arm	.316 ss	.1
10	.31072	.Body	.316 ss	.1
11	.23537	.Pin	.316 ss	.1
12	.22066	.Spacer	.316 ss	.2
13	.24182	.Float/Displacer	.Polypropylene	.1
14	.11571	.Pin	.15-7 PH ss	.1
15	.11566	.Wire	.18-8 ss	.24"
16	.23500	.Stop Ring	.316 ss	.2
17	.11565	.Crimp	.18-8 ss	.3
18	.24181	.Weight	.316 ss	.1

### Pneumatic Switch Cartridge

Part #	Model Option	Description
22935	..-1	..0-30 PSI Switch
22936	..-2	..0-60 PSI Switch
22899	..-3	..0-100 PSI Switch

All 282 Ports are 1/4" NPT Female

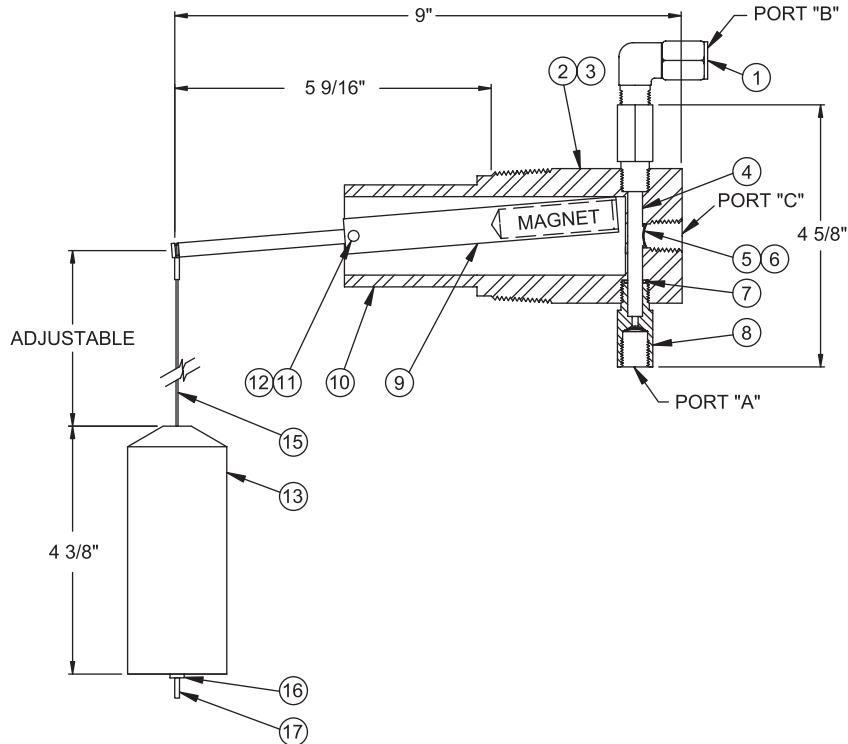
For Direct Acting Operation:  
 Connect Supply to Port "A"  
 Connect Output to Port "C"  
 Port "B" is Vent

For Indirect Acting Operation:  
 Connect Supply to Port "B"  
 Connect Output to Port "C"  
 Port "A" is Vent

# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 5, LINC 282-39 Level Switch



### The LINC 282-39 Pneumatic Series Parts List.

Item	Part #	Description	Material	Qty
1	.23339	.Vent Assembly	.Brass	.1
2	.10998	.Nameplate	.316 ss	.1
3	.10324	.Drive Screw	.18-8 ss	.2
4	.See Chart Below	.Switch Cartridge		
5	.11006	.Filter	.18-8 ss	.3
6	.10403	.Retaining Screen	.18-8 ss	.3
7	.10108	.O-Ring	.Fluorocarbon	.2
8	.22451	.Port Adapter	.303 ss	.2
9	.31074	.Float/Magnet Arm	.316 ss	.1
10	.31072	.Body	.316 ss	.1
11	.23537	.Pin	.316 ss	.1
12	.22066	.Spacer	.316 ss	.2
13	.23503	.Float/Displacer	.Polypropylene	.1
14	.11571	.Pin	.15-7 PH ss	.1
15	.11566	.Wire	.18-8 ss	.24"
16	.23500	.Stop Ring	.316 ss	.2
17	.11565	.Crimp	.18-8 ss	.3

### Pneumatic Switch Cartridge

Part #	Model Option	Description
22935	..-1	..0-30 PSI Switch
22936	..-2	..0-60 PSI Switch
22899	..-3	..0-100 PSI Switch

All 282 Ports are 1/4" NPT Female

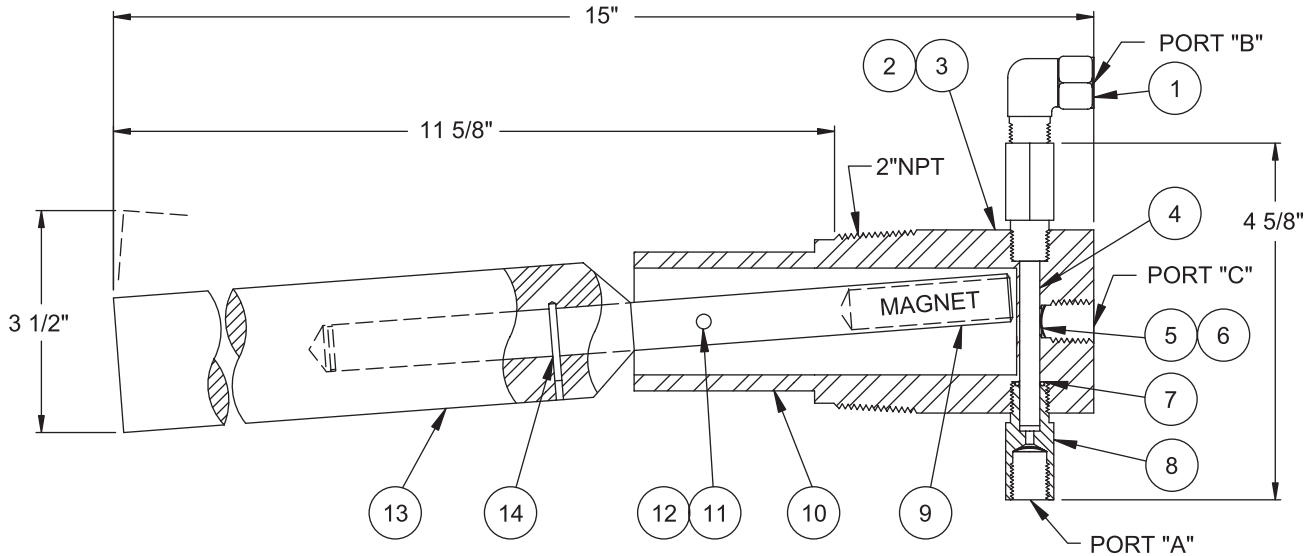
For Direct Acting Operation:  
 Connect Supply to Port "A"  
 Connect Output to Port "C"  
 Port "B" is Vent

For Indirect Acting Operation:  
 Connect Supply to Port "B"  
 Connect Output to Port "C"  
 Port "A" is Vent

# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 6, LINC 282-73 Level Switch



### The LINC 282-73 Pneumatic Series Parts List.

Item	Part #	Description	Material	Qty
1	.23339	.Vent Assembly	.Brass	.1
2	.10998	.Nameplate	.316 ss	.1
3	.10324	.Drive Screw	.18-8 ss	.2
4	.See Chart Below	.Switch Cartridge		
5	.11006	.Filter	.18-8 ss	.3
6	.10403	.Retaining Screen	.18-8 ss	.3
7	.10108	.O-Ring	.Fluorocarbon	.2
8	.22451	.Port Adapter	.303 ss	.2
9	.31113	.Float/Magnet Arm	.316 ss	.1
10	.31072	.Body	.316 ss	.1
11	.23537	.Pin	.316 ss	.1
12	.22066	.Spacer	.316 ss	.2
13	.23512	.Float/Displacer	.Polypropylene	.1
14	.11571	.Pin	.15-7 PH ss	.1

### Pneumatic Switch Cartridge

Part #	Model Option	Description
22935	..-1	..0-30 PSI Switch
22936	..-2	..0-60 PSI Switch
22899	..-3	..0-100 PSI Switch

All 282 Ports are 1/4" NPT Female

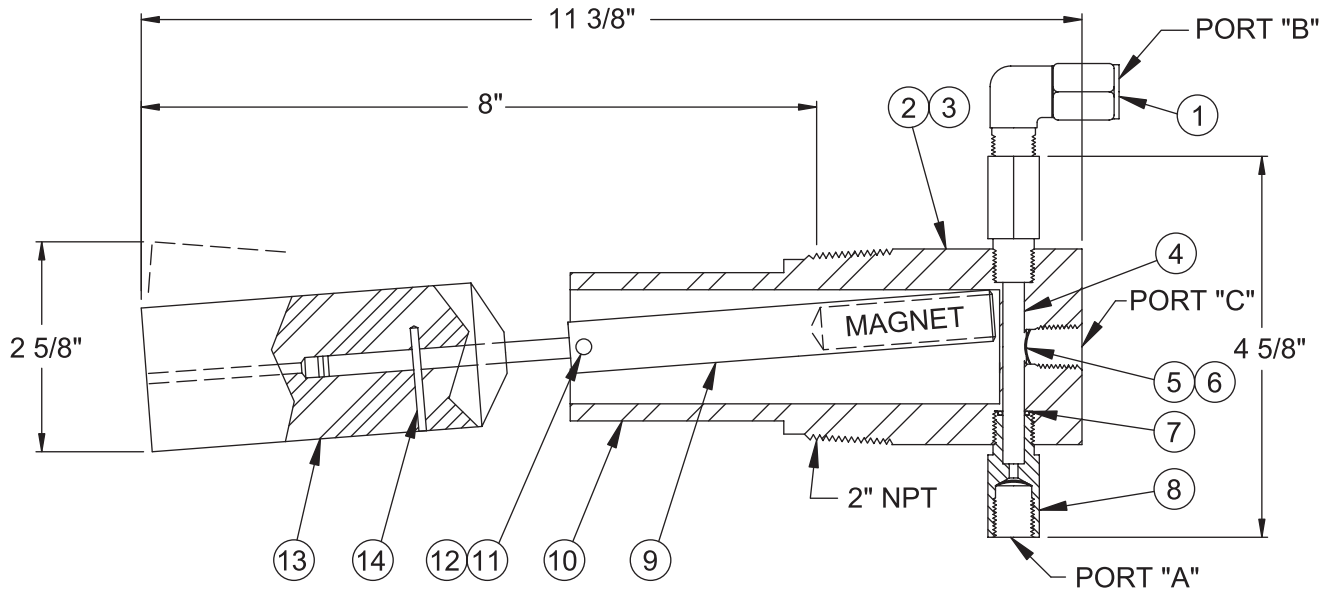
For Direct Acting Operation:  
 Connect Supply to Port "A"  
 Connect Output to Port "C"  
 Port "B" is Vent

For Indirect Acting Operation:  
 Connect Supply to Port "B"  
 Connect Output to Port "C"  
 Port "A" is Vent

# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 7, LINC 282-79 Level Switch



### The LINC 282-79 Pneumatic Series Parts List.

Item	Part #	Description	Material	Qty
1	.23339	.Vent Assembly	.Brass	.1
2	.10998	.Nameplate	.316 ss	.1
3	.10324	.Drive Screw	.18-8 ss	.2
4	.See Chart Below	.Switch Cartridge		
5	.11006	.Filter	.18-8 ss	.3
6	.10403	.Retaining Screen	.18-8 ss	.3
7	.10108	.O-Ring	.Fluorocarbon	.2
8	.22451	.Port Adapter	.303 ss	.2
9	.31074	.Float/Magnet Arm	.316 ss	.1
10	.31072	.Body	.316 ss	.1
11	.23537	.Pin	.316 ss	.1
12	.22066	.Spacer	.316 ss	.2
13	.23512	.Float/Displacer	.Polypropylene	.1
14	.11571	.Pin	.15-7 PH ss	.1

### Pneumatic Switch Cartridge

Part #	Model Option	Description
22935	..-1	..0-30 PSI Switch
22936	..-2	..0-60 PSI Switch
22899	..-3	..0-100 PSI Switch

All 282 Ports are 1/4" NPT Female

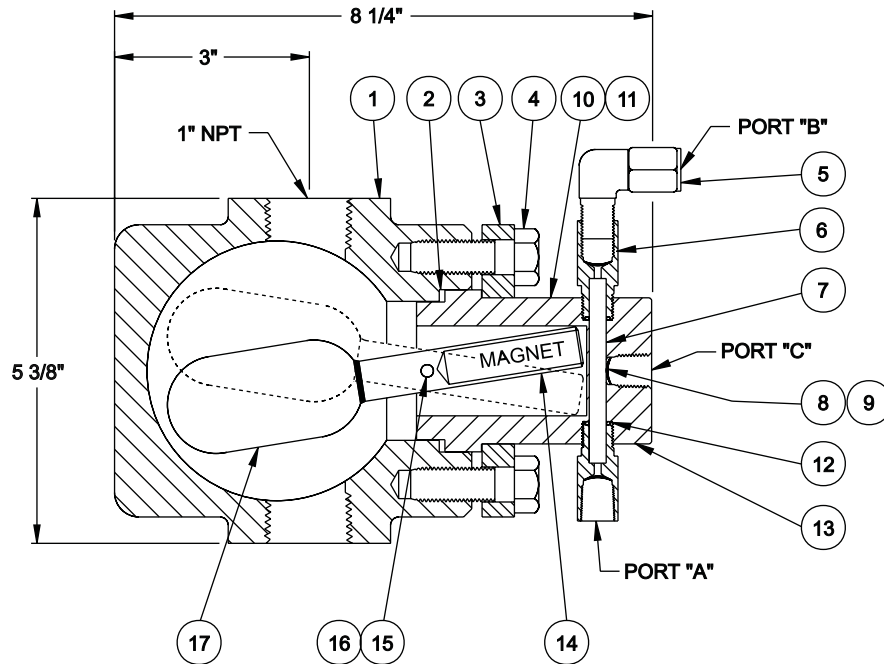
For Direct Acting Operation:  
 Connect Supply to Port "A"  
 Connect Output to Port "C"  
 Port "B" is Vent

For Indirect Acting Operation:  
 Connect Supply to Port "B"  
 Connect Output to Port "C"  
 Port "A" is Vent

# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 8, LINC 282SC-01 Level Switch



### The LINC 282SC-01 Pneumatic Series Parts List.

Item	Part #	Description	Material	Qty
1	.40256	.Cage	.Steel	.1
2	.11257	.Gasket	.PTFE	.1
3	.30258	.Ring Flange	.Steel	.1
4	.11216	.Cap Screw	.Plated, B7	.6
5	.23339	.Vent Assembly	.Brass	.1
6	.22451	.Port Adapter	.303 ss	.2
7	.See Chart Below	.Switch Cartridge	.Sealed	.1
8	.10403	.Retaining Screen	.18-8 ss	.3
9	.11006	.Filter	.18-8 ss	.3
10	.10998	.Nameplate	.316 ss	.1
11	.10324	.Drive Screw	.18-8 ss	.2
12	.10108	.O-Ring	.Fluorocarbon	.2
13	.30848	.Body	.316 ss	.1
14	.22068	.Float/Magnet Arm	.316 ss	.1
15	.20334	.Pin	.316 ss	.1
16	.22066	.Spacer	.316 ss	.2
17	.10245	.Float/Displacer	.316 ss	.2

### Pneumatic Switch Cartridge

Part #	Model Option	Description
22935	-.1	.0-30 PSI Switch
22936	-.2	.0-60 PSI Switch
22899	-.3	.0-100 PSI Switch

All 282 Ports are 1/4" NPT Female

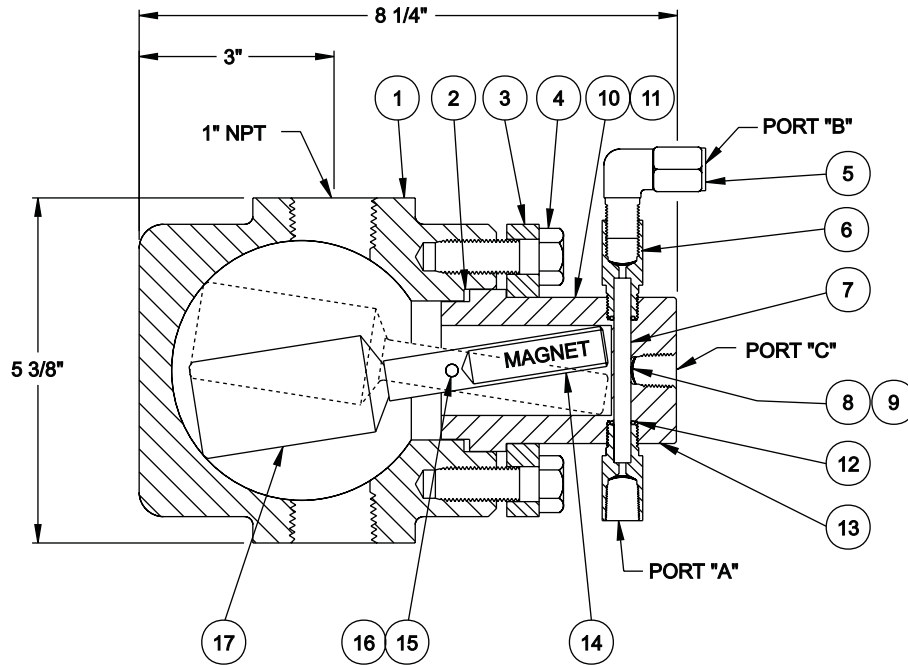
For Direct Acting Operation:  
 Connect Supply to Port "A"  
 Connect Output to Port "C"  
 Port "B" is Vent

For Indirect Acting Operation:  
 Connect Supply to Port "B"  
 Connect Output to Port "C"  
 Port "A" is Vent

# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 9, LINC 282SC-02 Level Switch



### The LINC 282SC-02 Pneumatic Series Parts List.

Item	Part #	Description	Material	Qty
1	.40256	.Cage	.Steel	.1
2	.11257	.Gasket	.PTFE	.1
3	.30258	.Ring Flange	.Steel	.1
4	.11216	.Cap Screw	.Plated, B7	.6
5	.23339	.Vent Assembly	.Brass	.1
6	.22451	.Port Adapter	.303 ss	.2
7	.See Chart Below	.Switch Cartridge	.Sealed	.1
8	.10403	.Retaining Screen	.18-8 ss	.3
9	.11006	.Filter	.18-8 ss	.3
10	.10998	.Nameplate	.316 ss	.1
11	.10324	.Drive Screw	.18-8 ss	.2
12	.10108	.O-Ring	.Fluorocarbon	.2
13	.30848	.Body	.316 ss	.1
14	.22068	.Float/Magnet Arm	.316 ss	.1
15	.20334	.Pin	.316 ss	.1
16	.22066	.Spacer	.316 ss	.2
17	.20892	.Float/Displacer	.Polypropylene	.1

### Pneumatic Switch Cartridge

Part #	Model Option	Description
22935	-.1	.0-30 PSI Switch
22936	-.2	.0-60 PSI Switch
22899	-.3	.0-100 PSI Switch

All 282 Ports are 1/4" NPT Female

For Direct Acting Operation:  
 Connect Supply to Port "A"  
 Connect Output to Port "C"  
 Port "B" is Vent

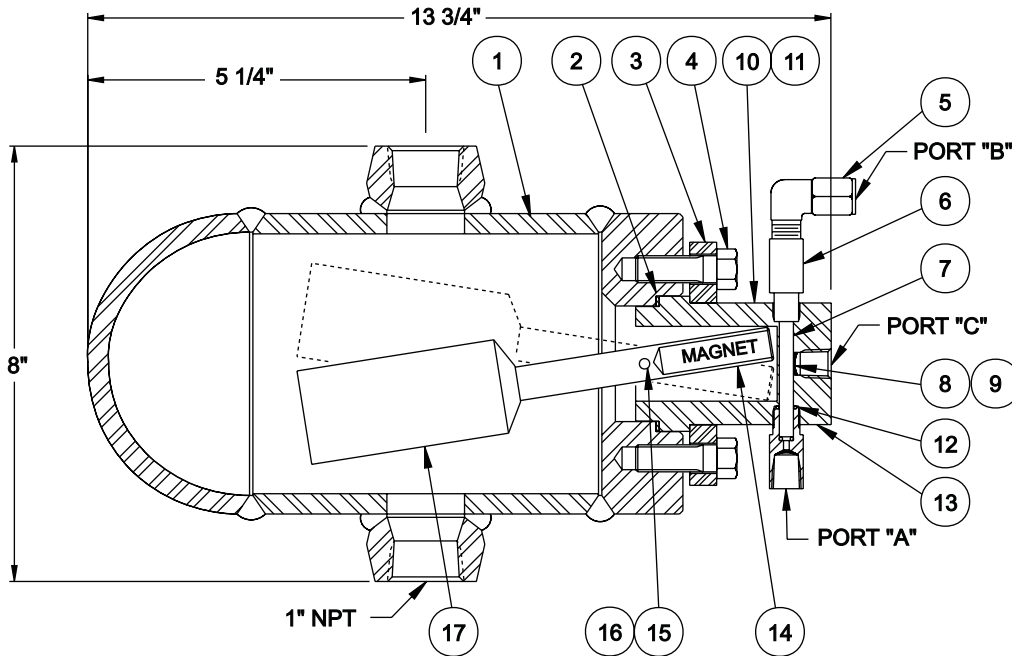
For Indirect Acting Operation:  
 Connect Supply to Port "B"  
 Connect Output to Port "C"  
 Port "A" is Vent



# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 10, LINC 282SC-03 Level Switch



### The LINC 282SC-03 Pneumatic Series Parts List.

Item	Part #	Description	Material	Qty
1	43561	Cage	Steel	1
2	11257	Gasket	PTFE	1
3	30258	Ring Flange	Steel	1
4	11216	Cap Screw	Plated, B7	6
5	23339	Vent Assembly	Brass	1
6	22451	Port Adapter	303 ss	2
7	See Chart Below	Switch Cartridge	Sealed	1
8	10403	Retaining Screen	18-8 ss	3
9	11006	Filter	18-8 ss	3
10	10998	Nameplate	.316 ss	1
11	10324	Drive Screw	18-8 ss	2
12	10108	O-Ring	Fluorocarbon	2
13	30848	Body	.316 ss	1
14	22166	Float/Magnet Arm	.316 ss	1
15	20334	Pin	.316 ss	1
16	22066	Spacer	.316 ss	2
17	20898	Float/Displacer	Polypropylene	1

### Pneumatic Switch Cartridge

Part #	Model Option	Description
22935	-1	0-30 PSI Switch
22936	-2	0-60 PSI Switch
22899	-3	0-100 PSI Switch

All 282 Ports are 1/4" NPT Female

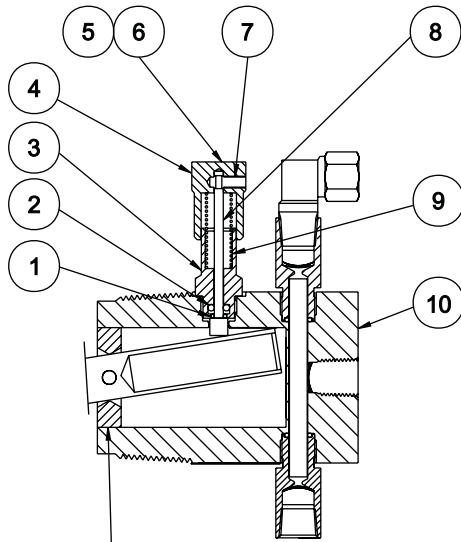
For Direct Acting Operation:  
 Connect Supply to Port "A"  
 Connect Output to Port "C"  
 Port "B" is Vent

For Indirect Acting Operation:  
 Connect Supply to Port "B"  
 Connect Output to Port "C"  
 Port "A" is Vent

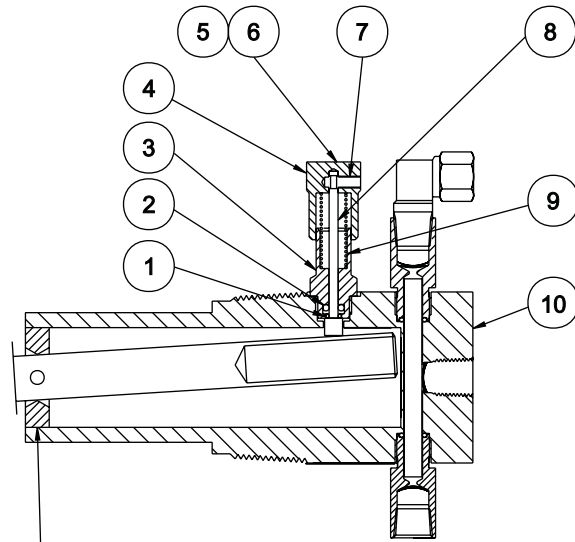
# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

Figure 11, LINC 282 Pneumatic Series:  
Manual Override Standard Units & Extended Body,  
Diagram and Parts List



ANNULUS PLUG OPTION  
SUBSTITUTE P.N. 22184  
FOR SPACERS



ANNULUS PLUG OPTION  
SUBSTITUTE P.N. 22184  
FOR SPACERS

### Manual Override Standard Units & Extended Body Parts List

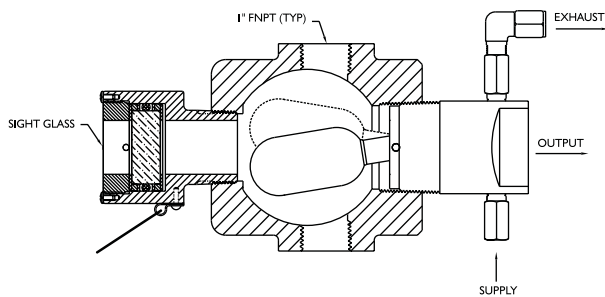
Model	282-2	282-6, -8	Description	Material	Qty
Item	Part #	Part #			
1	10282	10282	O-Ring	Fluorocarbon	1
2	11139	11139	O-Ring	Fluorocarbon	1
3	24991	24991	Nut, manual override	.303 ss	1
4	24993	24993	Knob	.303 ss	1
5	11186	11186	Nameplate	.316 ss	1
6	10324	10324	Drive Screw	.18-8 ss	1
7	11361	11361	Socket Head Screw	.316 ss	1
8	24992	24992	Stem	.316 ss	1
9	13175	13175	Spring	.18-8 ss	1
10	30809	31103	Level Control Body	.316 ss	1

PARTS FOR 282 CONTROLS WITH MANUAL OVERRIDE  
OTHER PARTS ARE SAME AS STANDARD UNIT

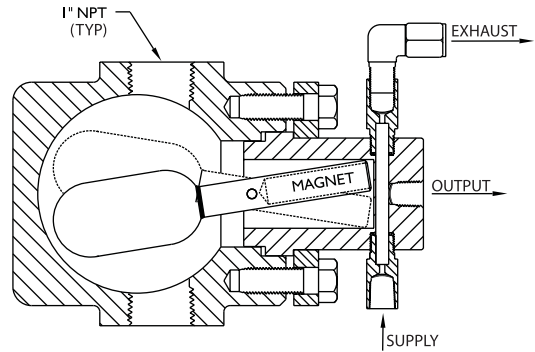
# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

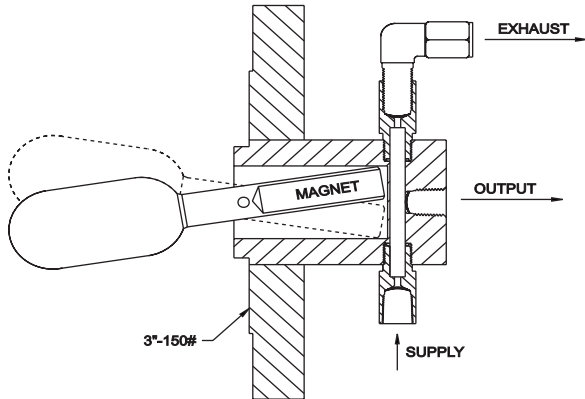
### Standard Unit Options



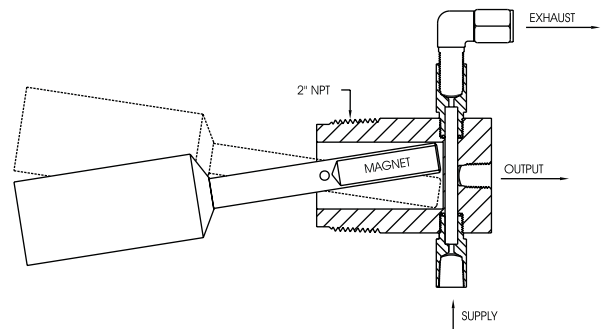
**282 & 700 Cage**  
Compact external cage available in steel or stainless steel.



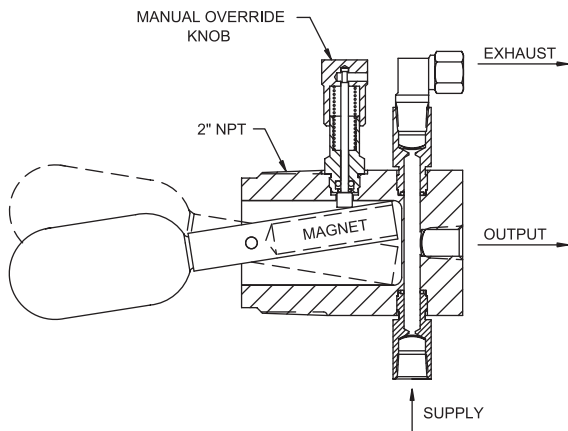
**282SC**  
This rig bolt configuration eliminates the 2" pipe threads on control mount and meets API-RP14E Specifications.



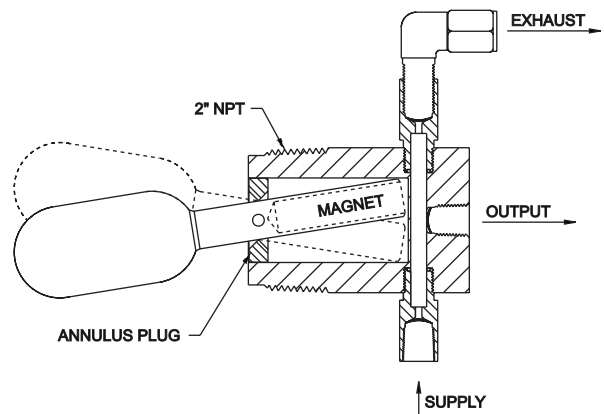
**282 Flanged**  
Flanged units are available in 3" and larger and all pressure ratings.



**282-13 Interfaced**  
The interface unit will operate in fluids with specific gravity differential as low as 0.1.



**282 Manual Override**  
Pushing the external causes the float arm to move, operating the pneumatic cartridge by manual means.

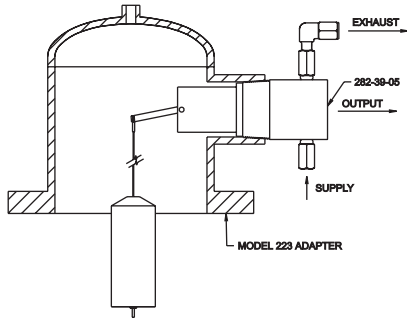


**282 Annulus Plug**  
The Annulus Plug prevents foreign material from getting into the cavity. Available on all models.

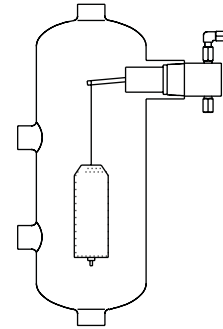
# INSTRUCTION MANUAL

## LEVEL CONTROL SWITCHES

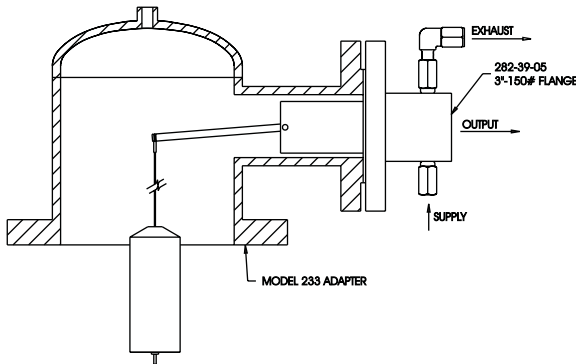
### Optional Configurations



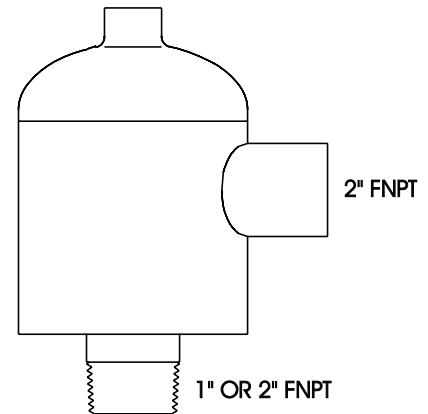
**282-39**  
Allows direct replacement of other manufacturer level control. Patent # 4,481,389.



Choice of threaded, beveled or flanged connections.

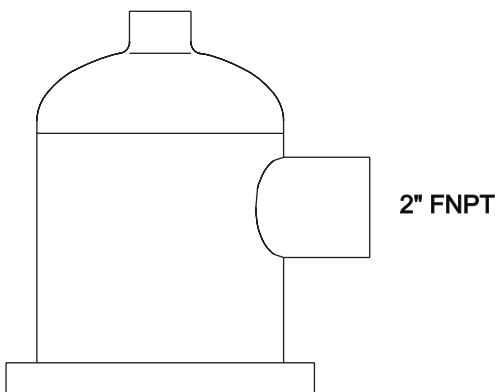


282-39-05 with Model 233 adapter.



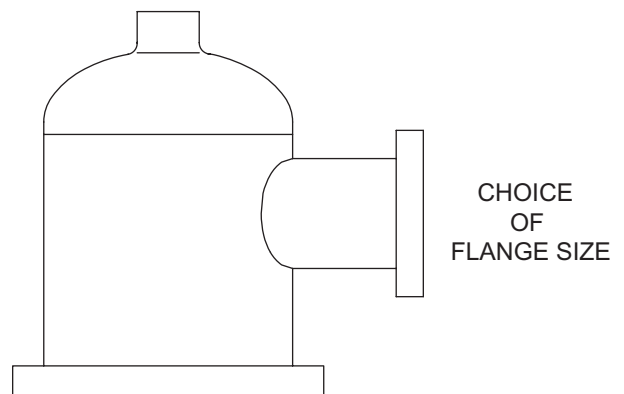
MODEL 221

Model 221.



MODEL 223

Model 223.



MODEL 233

Model 233.







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