



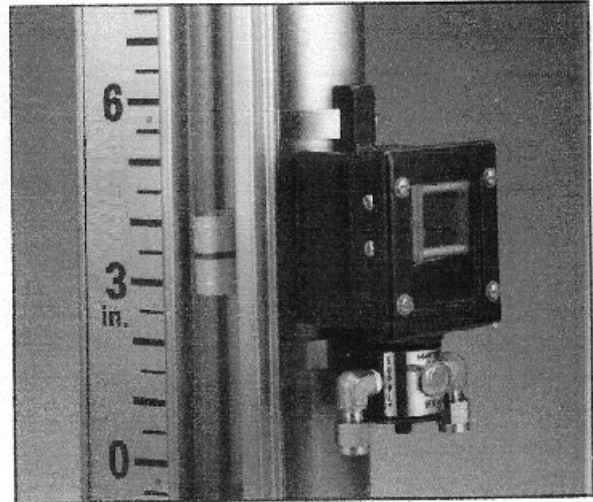
MODEL PS-35

MAGNETICALLY ACTUATED PNEUMATIC SWITCH

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FEATURES

- Unique Concept Of Magnetic Coupling, Eliminating Direct Contact With Process
- No Process Piping Or Valves Required
- Easy Mounting And Adjustment; Only Small Screwdriver Required
- Action Is Field Reversible
- Positive Action - Output Is Either Zero Or Supply Pressure, No Intermediate Values
- Vibration Resistant
- Integral High Volume, Rapid Response Relay
- Low Air Or Gas Consumption
- Corrosion Resistant Construction



PS-35

DESCRIPTION

The PS-35 is a point level (on-off) pneumatic switch device used in conjunction with A Magnetic Liquid Level indicator. The unique magnetic coupling action eliminates the need for such things as seals, diaphragms, springs, or torque tubes. Since process connections to the switch are eliminated, the user is insured complete isolation from the process. Valves are not required to block off the switch from the process for maintenance or operational testing. Preventive maintenance functions are greatly reduced since the switch never contacts the process fluid.

APPLICATION

The PS-35 is designed to provide a pneumatic control signal dependent on the liquid level within a vessel. The device is configurable such that actuation can occur on rising or falling level (see ordering information). When a magnetic field passes the switch in the first direction, the PS-35 will route the input supply gas through to its output port. When the field passes in the opposite direction, the supply gas is shut off (disconnected) from the output port and the output port vented to the atmosphere. The PS-35 thus provides the user with a pneumatic signal that can be used to activate alarms and/or open and close control valves. An example application would be the pneumatic operation of safety shutdown systems on oil and gas production equipment.

OPERATION

The PS-35 switch mechanism consists of the following integral components. 1) Actuating lever-spindle- magnet assembly, 2) Whisker valve assembly, and 3) Pneumatic relay. When the whisker valve is in the unactuated position (see Figure 1), a back pressure is created that causes the pneumatic relay diaphragm to move. This allows supply gas at the relay input port to pass through to the output port and thus to the final control element. As the magnetic field travels past the switch, the actuating lever tips the whisker valve, venting the back pressure on the relay. This allows the relay diaphragm to vent to atmosphere and move to the opposite position. The supply pressure is then blocked from the output port, and the output port is vented to atmosphere. The PS-35 is easily reconfigured in the field with regard to the action of the air-on/air-off relative to the Magnetic Field (see ordering information).

MOUNTING

The simplicity of mounting the PS-35 switch housing is such that the only necessary tool is a small screwdriver. The switch is attached via two small stainless steel hose clamps. These clamps allow the switch to be positioned anywhere over the entire length of the float chamber, thereby providing an infinitely variable trip point setting. Loosening the clamps will allow the PS-35 to be easily moved to provide a new trip point. Other switches can be added at anytime without the concern for additional process piping or valves.

NOTE:

Two switches can be mounted so they can trip at the same point or at two different points separated by less than the length of a switch

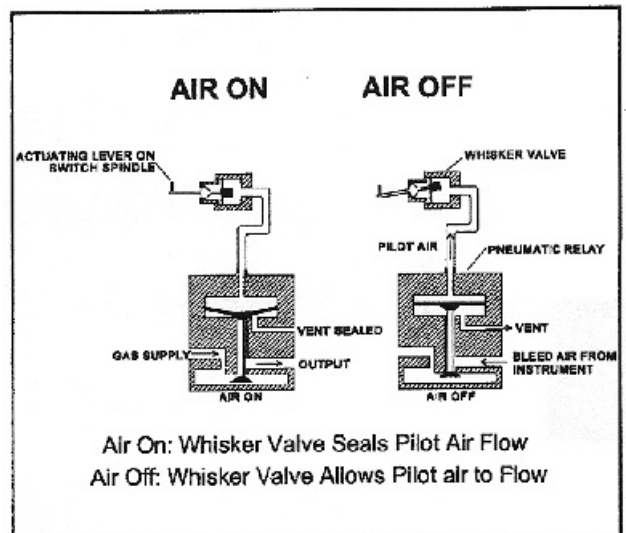


FIGURE 1

SPECIFICATIONS

Medium:	Filtered air or gas supply
Supply Pressure:	15 to 100 psig
Flow Rate:	22 cfm @ 100 psig
Connections:	1/8" MNPT
Dead Band: approx.	+/- 0.5" of movement (hysteresis)
Air Consumption:	0.10 scfm at 100psig
Temperature Rating:	-18C to 82C (consult factory regarding other temperature limits)
Housing:	NEMA 4X Stainless Steel
Other Options:	LR-35 Latching Relay for differential gap Control (see figure3)

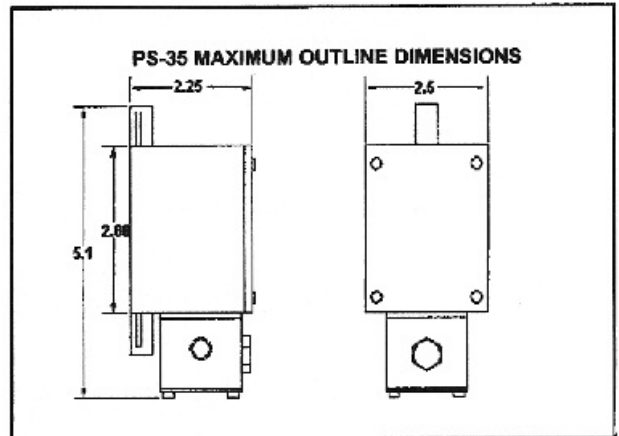


FIGURE 2

ORDERING INFORMATION

PS-35/A/B/C/D

a = L = Air on final control element when magnetic field is below switch

a = H = Air on final control element when magnetic field is above switch

b = F = Operational filter on input port of switch

c = RD = Operational Rod Mount

d = INS = Thermal insulation pad (allows operation to 450F)

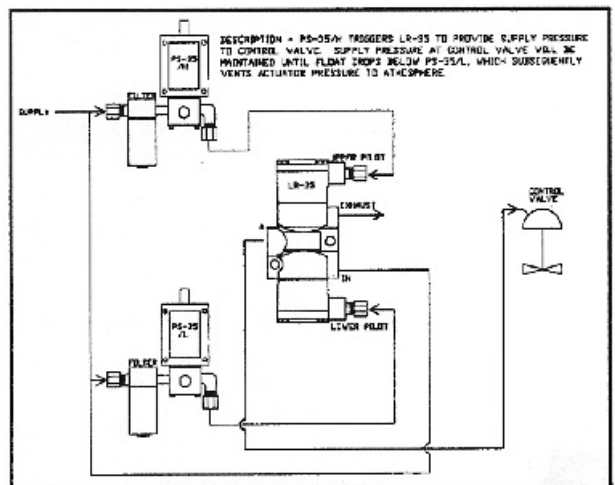


FIGURE 3 - Typical PS-35 / LR-35 Application For Differential Gap Control