



## OEM AIR PRESSURE SENSING SWITCHES WITH FIXED SET POINT

### APPLICATION

Series **RSS-495/498** switches feature customer-specified fixed set points between 0.12" w.c. and 4.00" w.c.

They can be used to sense positive, negative or differential air pressure, and are available with various sample line connections, terminal styles, and mounting arrangements.

### GENERAL DESCRIPTION & OPERATION

The thermoplastic housing contains a sensing diaphragm and includes the externally-mounted snap-acting switch.

Sample line connectors are located on either or both sides of the diaphragm to accept air sample connections.

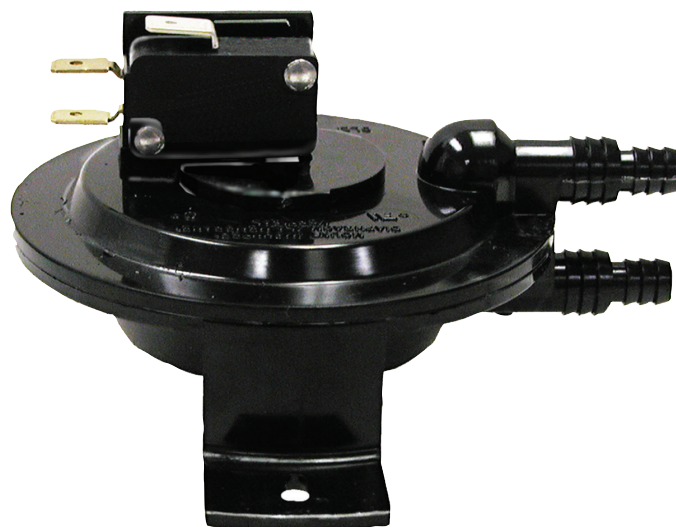
The electrical connection consists of male quick-connect terminals.

The snap action switch can be actuated by a pressure or vacuum air flow, or by a pressure or vacuum differential.

### MOUNTING (FIGURE 1)

Select a mounting location free from vibration. Mount with the diaphragm in any vertical plane in order to maintain the specified operating set point. Avoid mounting with the sample line connections directed upward.

Standard surface mount arrangement is via the two 0.14" slots in the bracket. Various other mounting configurations are available (see **Figure 4**).



### AIR SAMPLING CONNECTION (FIGURE 2)

Series **RSS-495/498** switches are available with many different types of sample line connections that accept a wide range of flexible and rigid sample line connections (see **Figure 5**).

Refer to **Figure 2** to identify the **High inlet (H)** and the **Low inlet (L)**. Connect the sample lines as follows:

**Positive Pressure Only:** Connect the sample line to H; L remains open to the atmosphere.

**Negative Pressure Only:** Connect the sample line to L; H remains open to the atmosphere.

**Two Negative Samples:** Connect higher negative sample to L; lower sample to H.

**Two Positive Samples:** Connect higher positive sample to H; lower sample to L.

**One Positive and One Negative:** Connect positive sample to H; connect negative sample to L.

### ELECTRICAL CONNECTIONS (FIGURE 3)

The snap switch has male quick connect terminals in 1/4" and/or 3/16" sizes. Before pressure is applied to the diaphragm, the switch contacts will be in the deactivated position as shown in **Figure 3**.

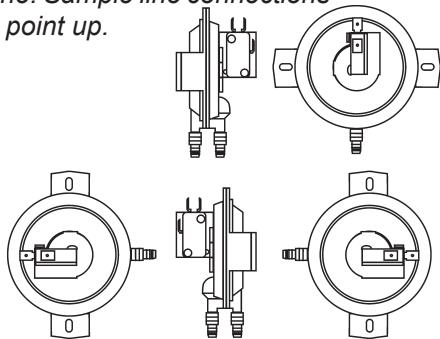


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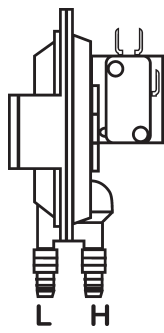
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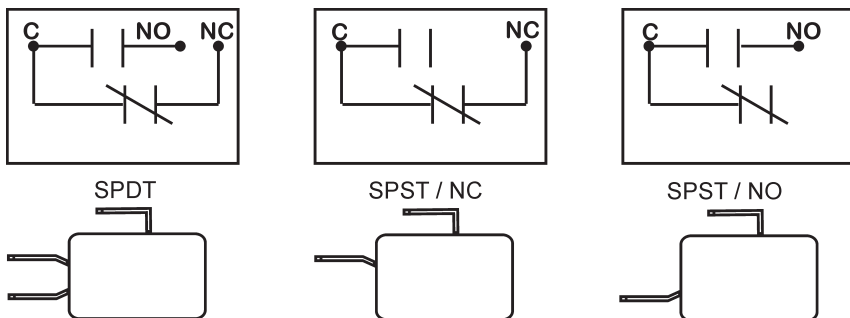
**Fig. 1:** Mount with the diaphragm in any vertical plane. Sample line connections should not point up.



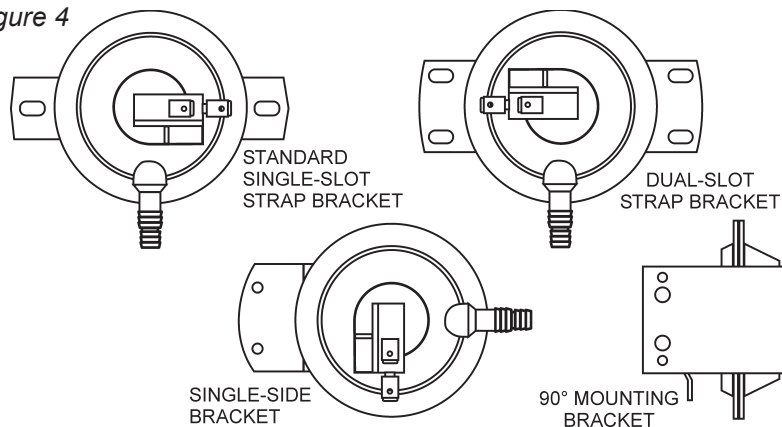
**Fig. 2**



**Fig. 3:** Without pressure applied to the diaphragm, switch contacts are in the position shown.



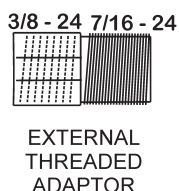
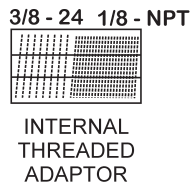
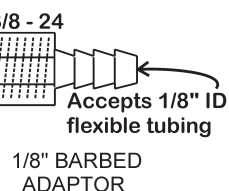
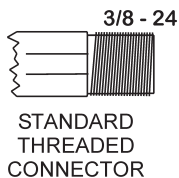
**Figure 4**



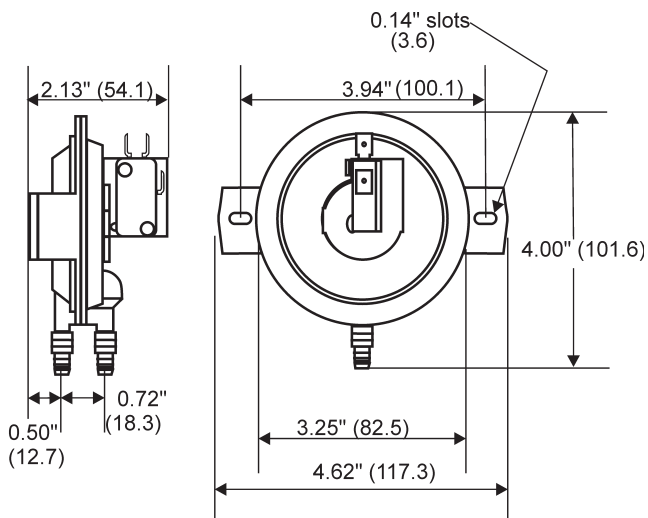
**Figure 5**

**STANDARD BARBED CONNECTOR**

Accepts 3/8" ID flexible tubing.  
Accepts 1/4" ID flexible tubing.



**Nominal Dimensions in Inches (Millimeters)**



**Specifications**

**Series RSS-495/498  
Air Pressure Sensing Switches**

**Mounting Position:**

Mount with the diaphragm in any vertical plane to obtain specified operating set point.

**Set Point Range:**

Factory calibrated to meet customer design specification, from  $0.12 \pm 0.05$ " w.c. to 4.0" w.c.

**Approximate Switching Differential:**

$0.10 \pm 0.02$ " w.c.

**Measured Media:**

Air, or combustion by-products that will not degrade polyisoprene and Thermo-plastic.

**Operating Temperature Range:**

-40 °F to 190 °F (-40 °C to 88 °C).

**Maximum Pressure:** 1 psi (0.06 bar).

**Life:** 100,000 cycles minimum.

**Electrical Rating:**

5 amp noninductive 120 to 277 V AC  
1 amp pilot duty (120 va) at 120 V AC

**Contact Arrangement:**

SPDT, SPST/NO or SPST/NC logic.

**Electrical Connections:**

Male, 1/4" and/or 3/16" quick-connect spade terminals.

**Sample Line Connections:**

Standard barbed fittings will accept 1/4" ID or 3/8" ID flexible, slip-on tubing.

**Approvals:**

UL, CUL, CSA, CE, Australian Gas Association

**Shipping Weight:** 0.25 lbs.

**Options:**

- Bleed hole.
- Custom mounting brackets.
- Flow restriction orifice
- Snap switch positions.
- Sample line connector positions.