



Air pressure sensing switch with electrical cycle timing board

Application

Model **APS** is an airflow proving switch with an electronic cycle timing board for HVAC application. It can be used to sense positive air pressure and activate an auxiliary fan. The **APS** is equipped with a convenient barbed sample line connector that accepts flexible tubing.

General description & operation

The zinc plated housing contains a diaphragm with a snap acting SPST switch. The barbed sample line connection is located on the high pressure side of the diaphragm. The SPST snap action switch operates on pressure rise of $0.05'' \text{ w.c.} \pm 0.02 \text{ w.c.}$ For model with adjustment screw the pressure rise can be adjusted from $0.05'' \text{ w.c.} \pm 0.02 \text{ w.c.}$ to $2.0 \pm 0.02 \text{ w.c.}$ The cycle timing board functions as an integral recycling delay timer.



Electrical connection (Figures 1 & 2)

Please note the following steps must only be carried out by a qualified electrician. Before pressure is applied to the diaphragm, the switch contact will be in null position.

Air sampling connection (Figure 2)

The **APS** is equipped with a barbed $\frac{1}{4}''$ slip-on sample line connection situated on the high pressure side of the diaphragm as shown in figure 2. The connection is suitable for flexible tubing. Locate the sampling probe a minimum of 1.5 duct diameters downstream from the air source. Install the sampling probe as close to the center of the airstream as possible.

Mounting (Figure 3)

Select a mounting location which is free from vibration. The **APS** must be mounted with the diaphragm in any vertical plane in order to maintain the specified operating set point. Avoid mounting with the sample line connection in "up" position. Surface mount via the two $\frac{3}{16}''$ diameter holes on the strap bracket.



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Design and specifications subject to change without notice.

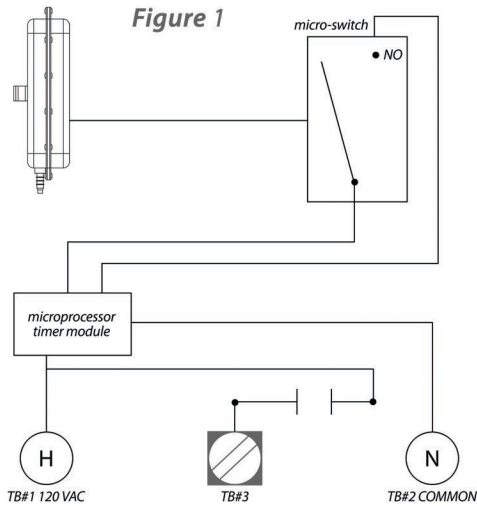


Figure 1 : Before pressure is applied to the diaphragm, the switch contacts will be in the null position.

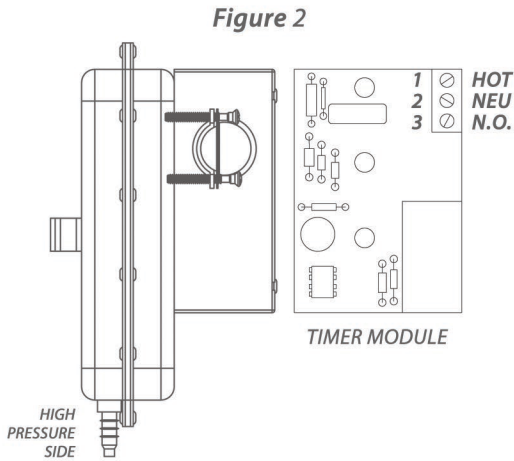


Figure 2 : The sample line connection is situated on the high pressure side of the diaphragm.

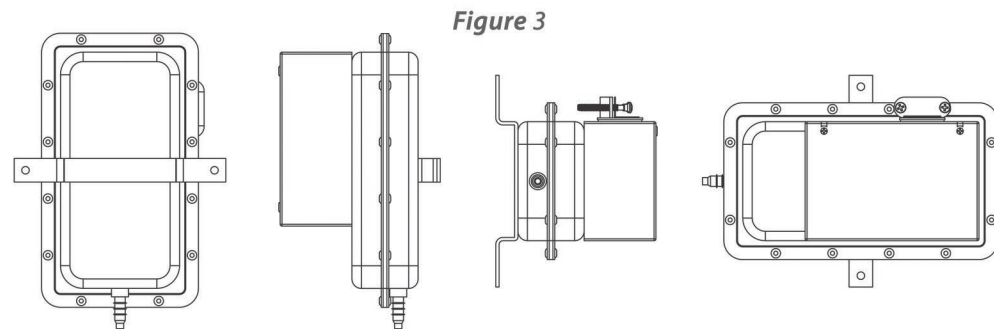
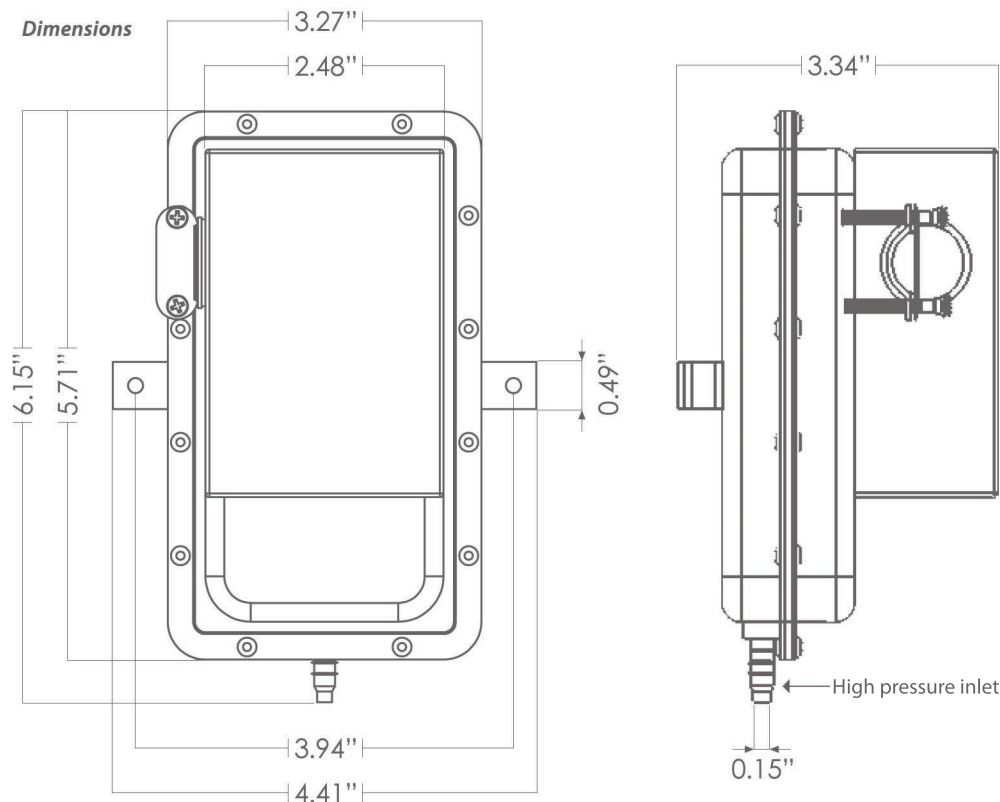


Figure 3 : Mount with the diaphragm in any vertical plane.



Specifications
Model APS
Air pressure sensing switch
with fixed set point

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

Set point :
 Fixed to operate on pressure rise at 0.05 ± 0.02 "w.c. (1.27 ± 0.508 mm)

For APS-A (with adjustment screw) :
 Fixed to operate on pressure rise at 0.05 ± 0.02 "w.c. to 0.2 ± 2.0 "w.c.

Switching differential (approximate) :
 0.02 ± 0.01 "w.c. (0.508 ± 0.254 mm w.c.)

Measured media :
 Air, or combustion byproducts that will not degrade silicone.

Maximum pressure :
 1/2 psi (0.03 bar)

Operating temperature range :
 -40°F to 180°F
 (-40.0°C to 82.2°C)

Life :
 100,00 cycles minimum at 1/2 psi maximum pressure each cycle and at maximum rated electrical load.

Electrical rating :
 300 VA pilot duty at 155 to 277 VAC, 15 amps non inductive to 277 VAC, 60 Hz.

Contact arrangement :
 SPST-NO

Electrical connections :
 Screw-type terminals.

Sample line connector :
 Barbed 1/8" - 1/4" slip-on connector accepts flexible tubing.

Shipping weight :
 1.2 lbs.

Approvals :
 ETL

Functional specifications

Integral recycling delay timer with 10 minutes ON, 15 seconds OFF cycle, 120 volt input.

Power :
 120 VAC +10%/-15%, 50/60 Hz.

Timing range :
 10 minutes (600 seconds) $\pm 10\%$

Output :
 SPST NO relay rated for 8 amps (resistive) @ 250 VAC or 1/8 hp @ 250 VAC.

Electrical connections :
 Terminal block with clamp-type screw connector suitable for 12-26 AWG.

Temperature range :
 -40° to 140°F (-40° to 60°C).