

How to install the Differential Air Pressure Sensor

The Differential Air Pressure (DAP) sensor requires a software update to the latest version on the download site as of Feb 29, 2009.

The purpose is to measure the difference in air pressure between 2 rooms. Depending on user needs, the pressure can be negative or positive. The direction of the air flow (negative/positive) is more important than the value of the pressure. The sensor measures pressure in “inches of column water.”

This sensor is designed for continuous monitoring and alerting, such as in a pharmacy compounding room or clean room.

Sensor components:

- DAP sensor
- 6V Power supply
- Air tube
- 2 alarm modules
- Wires with jacks for alarm modules

Installation:

1. Be very careful when handling the sensor. The air pressure element is very delicate and the accuracy can be offset if dropped or bumped. Be gentle when inserting the air tube into the nozzle.
2. Drill a hole in the wall large enough to pass through the alarm jacks and air tube.
3. The DAP sensor can be installed on either side of the door:
 - a. If **positive** (pressure on the side of the room with the sensor has a higher pressure), then attach the air tube to the N (negative) nozzle. Push the open end of the air tube to the other side of the wall.
 - b. If **negative**, attach the air tube to the P (positive) nozzle.
 - c. Air tube is attached to only one nozzle.
 - d. Sensor can be wall mounted with double sided tape or Velcro
 - e. Pass through a stick or stiff wire through the hole, tape jack to the stick and pull through.
 - f. After the alarm wire is through the hole, tape the air tube to a section of the alarm wire and pull through.
 - g. Mount alarm modules with double sided tape or Velcro.
 - h. Power sensor by inserting the power plug
 - i. Insert all jacks on modules and sensor.

Alarm:

- There are 2 alarm modules to be installed on both sides of the door.
- The audio-visual alarm is automatically triggered when the pressure difference comes close to zero.
- The sensor checks every 40 seconds for a change in pressure, and will transmit if there is a change or every 15 minutes if no change.
- If the pressure difference is zero or less for longer than 30 seconds, the alarm will activate.
- User can silence the alarm by pressing the red buttons on either alarm modules.
- This alarm works independently of the CheckPoint software, so you cannot control the alarm through the software.
- The alarm cannot be turned off, unless the user unplugs the alarm jacks.
- The alarm event is recorded in the software as vertical lines on the chart. Red when the alarm was activated, Green when the user shut off the alarm.
- In the software the min/max and alert time threshold can be set up, like other sensors.
- There is no battery backup, so no data is recorded if the power is unplugged.
- Sensor does have memory to store data if there is a system failure.

Test:

- After installing, open the door for about 30 seconds until the alarm modules activate.
- Silence alarm by pressing red button on one module
- Repeat for other module.