

AVTECH's Air Flow Sensors monitor air flow (or lack of air flow) for fans and vents, such as HVAC vents, internal/external server exhaust fans, cooling fans, and dehumidifier fans. When air flows through the sensor, its flap opens, changing its switch state; when no air flow is present, its flap remains closed (as pictured here). AVTECH offers two types of Air Flow Sensor: one whose switch state is normally closed (NC) and one whose switch state is normally open (NO).

Air Flow Sensor Package Contents

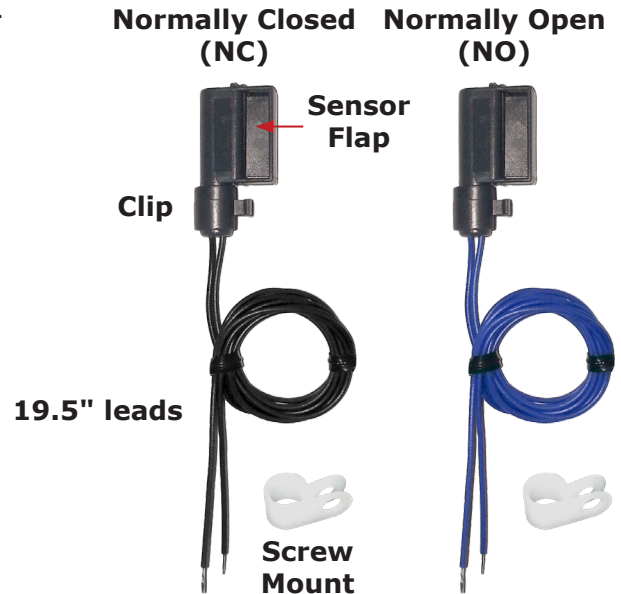
- One (1) Air Flow Sensor (NC or NO)
- One (1) 25' speaker cable

Air Flow Sensor Features

Switch States

In the "normally closed" Air Flow Sensor, no air flow = switch state closed. In the "normally open" type, no air flow = switch state open.

Air Flow Sensor Type	Switch state CLOSED means...	Switch state OPEN means...
Normally Closed (NC) RMA-AF1-SEN (Color of leads: black)	No air flow detected (normal) Physical sensor flap closed	Air flow detected (alarm) Physical sensor flap open
Normally Open (NO) RMA-AF2-SEN (Color of leads: blue)	Air flow detected (alarm) Physical sensor flap open	No air flow detected (normal) Physical sensor flap closed.



Install Your Air Flow Sensor



Do not use this sensor in hazardous (classified) locations or life safety applications.

Step 1: Mount your Air Flow Sensor.

1. Position the Air Flow Sensor on the fan or vent so that any air passing through that location will move the sensor flap.

Because the sensor's switch is magnetically actuated, iron-containing metals (like sheet metal), electromagnetic fields (such as from transformers, motors, etc.) and other magnets may affect the operation of the sensor. Make sure there is enough distance between the Air Flow Sensor and those sources of interference.

2. Mount the unit in place using the clip or screw mount provided.

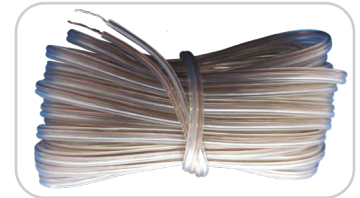
Step 2: Connect your Air Flow Sensor to Room Alert.



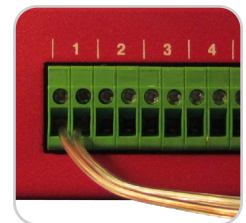
Do not connect the switch sensor inputs (dry contacts) on AVTECH products to any live circuit.

Use only low-voltage 2-wire cable to connect switch sensor inputs.

Your Air Flow Sensor comes with a 25' speaker cable. Follow these steps to attach one end of the speaker cable to the Air Flow Sensor's leads, which are non-polarized, and the other end to a switch port on your Room Alert:



1. Separate and strip the leads on one end of the included speaker cable, exposing about 1/4" of wire.
2. Separate and strip the leads on the other end of the included speaker cable, exposing about 1/2" of wire.
3. Twist the speaker cable leads with 1/2" exposed wire to the Air Flow Sensor's leads. (You may also need to strip the Air Flow sensor's leads a bit more to have enough to twist, as they arrive with about 1/4" exposed wire.) The Air Flow Sensor's leads are non-polarized, so you may connect either side of the speaker cable to either side of the sensor leads.
4. Cap or tape the connected leads to avoid a short.
5. Run the speaker cable back to your Room Alert. Try to avoid running it near large electromagnetic devices or fluorescent lights, which produce EMI and can interfere with sensor readings.
6. Connect the free ends (the 1/4" leads) of the speaker cable to an open switch port on your Room Alert. Be sure the bare wire, not the insulation, connects to the port. Again, the leads are non-polarized, so you may connect either lead to either side of the open port.



Sensor Features & Specifications

Environment Condition Monitored	Air Flow
Type Of Sensor	Switch
<i>Air Flow Sensor 1 (NC)</i>	
Normal State	Closed (no air flow detected)
Alarm State	Open (air flow detected)
<i>Air Flow Sensor 2 (NO)</i>	
Normal State	Open (no air flow detected)
Alarm State	Closed (air flow detected)

Air Flow Sensors (RMA-AF1-SEN & RMA-AF2-SEN)

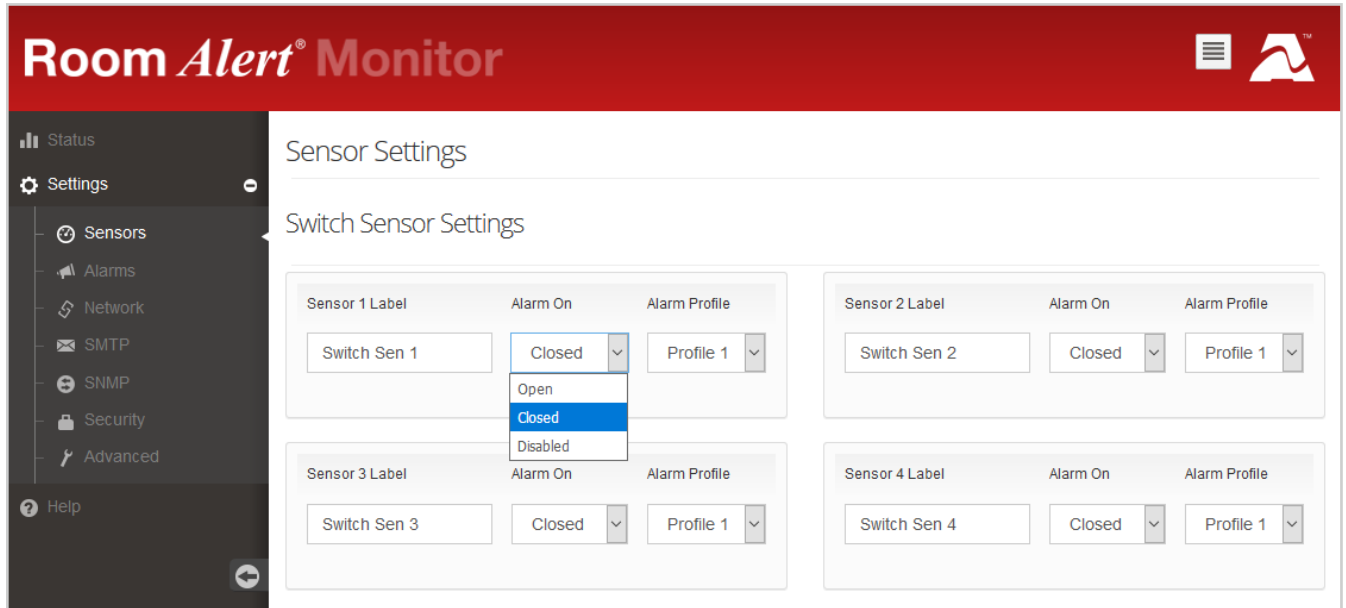
Sensor Cable Type	Low-voltage, two-wire speaker cable
Included	Yes
Length	25'
Maximum Extendible Length	900'
Air Velocity	Sensor flap closes at less than 8.2 ft/s (2.5 m/s) Hysteresis: 3.28 ft/s (1 m/s)
Operating Temperature Range	-4° F to 140° F (-20° C to 60° C)
Compatible Products	Any Room Alert model or Wireless Sensor Hub

AVT-171211-1.1.0

Configure Your Switch Sensor

Use Room Alert Monitor's Built-In Web Interface

Navigate to **Settings** → **Sensors** in your Room Alert Monitor's web interface. The options you see below will vary depending on your Room Alert model.



1. Scroll down to *Switch Sensor Settings*.
2. Find the switch sensor label that matches the port you connected your switch sensor to. For example, if you used the first switch sensor port on your Room Alert Monitor, look for *Sensor 1 Label*; if you used the second, look for *Sensor 2 Label*, and so on.
3. In *Sensor X Label*, you may leave the default, "Switch Sen X," or enter something more descriptive. Room Alert "E" models accept up to 15 characters, including only letters, numbers, spaces, hyphens (-), underscores (_) or periods (.). Room Alert "S" models accept up to 30 characters, including the above and special characters, like ampersand (&).
4. In *Alarm On*, select the alarm state (**Open** or **Closed**) for your switch sensor. You may find the alarm state of your switch sensor under the *Features & Specifications* section of this Installation Note.
5. In *Alarm Profile*, which controls light towers and relays on your Room Alert Monitor, you may leave the default, **Profile 1**, or choose another profile from the drop-down menu.
6. Select **Save Settings** at the top or bottom of the page. Your Room Alert Monitor will automatically reboot and commit your changes.