

**Air Motion Relay
Data Sheet**

This relay is used to sense suction and/or discharge pressures across a coil or fan and control pneumatic damper actuators or valves piped downstream from this device. By the use of sensing lines located at a fan suction and discharge and piped to the "hi" and "lo" ports of this relay, this device is able to detect whether or not a fan is operating. This same operation can also be detected by using one port of the 2374 as a reference port and piping the other port to the fan suction or discharge providing there is a differential pressure of at least 0.15" W.C. This is not a "snap acting" device and must be used only on applications where there is a positive change, 0 to 0.15" W.C., in the sensed differential pressure. Several applications of this relay would be the sensing of fan operation in unit ventilators, fan coil units and air handling units. Ruggedly constructed of Lexan and using a molded neoprene diaphragm, this relay is designed to give many years of trouble-free service.

Ordering Data

TAC Wholesale Number	Replaces Model	Comments
2374-401	R435	Minimum 0.15" W.C.

GENERAL INSTRUCTIONS

1. To be used on clean, dry, oil-free control air only. Do not use on any other medium.
2. This relay must be mounted in a horizontal position. Be sure the correct side is up as noted on the device.

SPECIFICATIONS

Air pressure: 15 psig - 30 psig maximum.

Connections: "lo" and "hi" ports - use 3/8" O.D. plastic tubing signal - use 1/4" O.D. plastic tubing.

Air use: .49 SCIM.

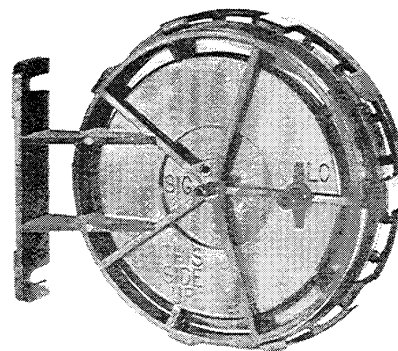
Dimensions: see Figure 2.

Caution: This device should be installed by a qualified person with due regard for safety as improper installation could result in a hazardous condition.

INSTALLATION INSTRUCTIONS

Mounting

Using the integral mounting flange, the unit may be mounted using two machine screws or self tapping screws. (Two #10 x 5/8" pan head self tapping screws are supplied.) Be sure that the relay is mounted in a horizontal position with "THIS SIDE UP" on the top. Figure 1 shows a typical mounting arrangement for this device to sense fan operation in a unit ventilator.



In Figure 1 the "lo" pressure sensing port is piped to the suction of the fan and the "hi" pressure port is the reference port. It may be necessary in some cases to pipe the "hi" pressure port to sense the fan discharge pressure also if there is not at least 0.15" W.C. differential pressure between the fan suction pressure and the reference pressure.

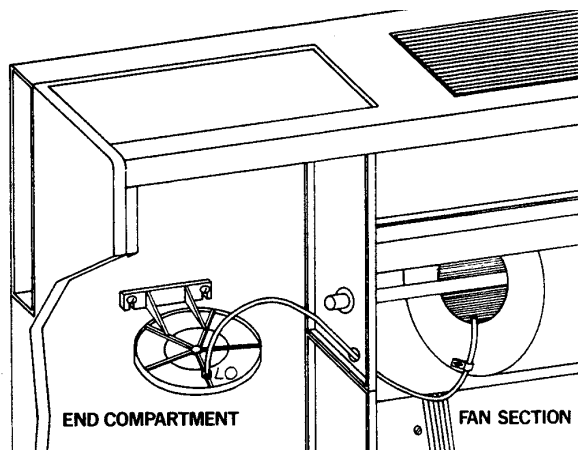


Figure-1 Air Motion Relay Mounted in Unit Ventilator.

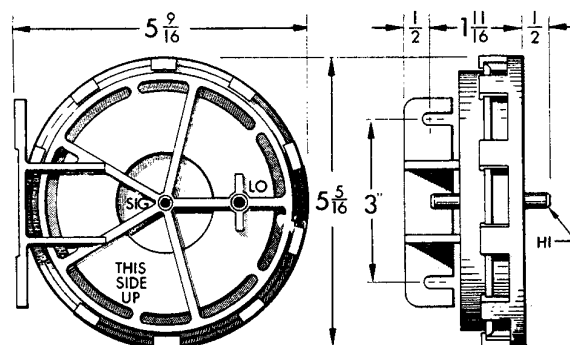


Figure-2 Dimensions.

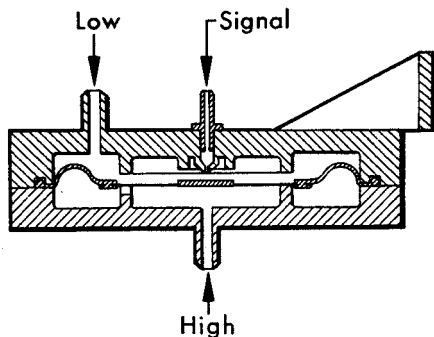
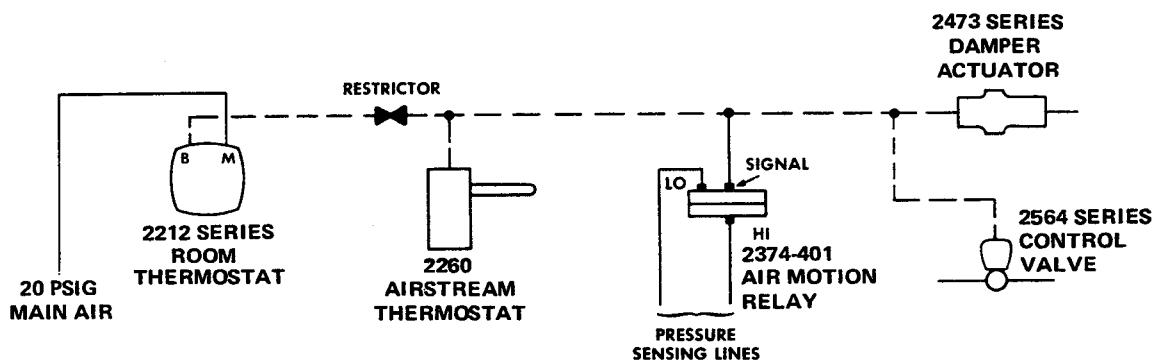


Figure-3 Airstream Low Unit.

OPERATION AND MAINTENANCE

When the unit fan is operating, this relay senses the differential pressure across the fan, causing the diaphragm to move up and seal off the signal nozzle. This will allow the pressure downstream from this device to build up and control pneumatic valves or damper actuators. When the unit fan is not operating, the resultant equalized pressure across the diaphragm will allow the diaphragm to fall away from the signal port nozzle. Any pressure at the signal port will then exhaust to atmosphere through the "lo" pressure sensing port. There is no maintenance required on this unit. In the event of a malfunction, make sure all air lines and restrictors are clean and open. If they are, discard the unit and replace it with a new relay.

TYPICAL APPLICATION



TYPICAL UNIT VENTILATOR CONTROL APPLICATION