Aprilaire®

Manual Humidifier Control

Safety and Installation Instructions

READ COMPLETE INSTALLATION INSTRUCTIONS AND TEMPLATE BEFORE STARTING.

⚠ WARNING

ATTENTION INSTALLER: This product must be installed by a qualified heating and air conditioning contractor. Failure to do so could result in serious injury from electrical shock.

THESE INSTALLATION INSTRUCTIONS ARE FOR THE APRILAIRE MANUAL HUMIDIFIER CONTROL ONLY! For Aprilaire® humidifier installation, follow Aprilaire Humidifier Installation Instructions.

The Manual Humidifier Control (Part 4655) is designed for low voltage service to control humidification equipment. An increase in relative humidity (RH) expands the nylon ribbon which opens the control switch to stop operation of the humidifier. A decrease in RH reverses the process and closes the control switch.

⚠ WARNING

1. 120 volts may cause serious injury from electrical shock. Disconnect electrical power to the furnace before starting installation.
2. Sharp edges may cause serious injury from cuts. Use care when cutting plenum openings and handling ductwork.

⚠ CAUTION

1. Do not set humidity higher than recommended. Condensation damage may result.
2. Do not set humidity up to recommended levels if there is condensation on the inside of windows of any unheated living space. Condensation damage may result.
3. Do not mount the Manual Humidifier Control on the supply plenum or duct. The unit cannot withstand supply temperatures and will malfunction.
4. Do not mount the Manual Humidifier Control downstream of the bypass outlet. False humidity conditions will cause the humidifier to operate incorrectly.

LOCATION

Control can be mounted on wall in living space or on return duct.

For Wall Mount:

- Locate on an inside wall of living area approximately 5' above the floor.
- Do not locate control in the direct path of drafts from open doors and windows.
- Do not install where operation might be affected by lamps, sunlight, fireplace, registers, radiators, concealed air ducts and pipes, or room occupants.
- The basic rules for location of thermostats also apply to humidifier controls.

For Duct Mount:

Locate on the furnace return air plenum or duct, at least 6" upstream of the humidifier, humidifier bypass ductwork (if applicable) or fresh air intake ductwork (if applicable).

GENERAL INSTRUCTIONS

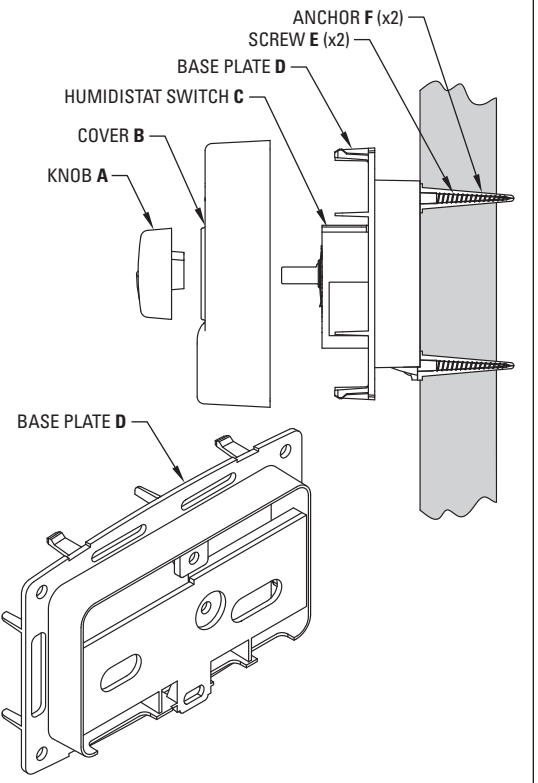
- Do not mount the Humidifier Control on counter flow furnace. Furnace malfunction will result in improper humidifier operation.
- Be sure the Humidifier Control is installed on a 24 VAC circuit only.
- Make sure no bare wires are exposed or insulation damaged.
- Make sure all splices are mechanically and electrically secure.
- To remove dirt or other foreign matter from the nylon ribbon and control interior, dust lightly with a fine soft brush.

INSTALLING AND WIRING

Wall Installation:

1. Select location for the Humidifier Control on an inside wall. Mount the Humidifier Control in a location where low voltage wires from the furnace area are already in place, or can be easily run.
2. Drill a 1/2" hole into the wall at the selected Humidifier Control location.
3. Pull low voltage wires from the furnace area and through the hole in the wall. Before mounting the Humidifier Control, the hole in wall should be plugged to prevent drafts affecting the Humidifier Control reading. All wiring should conform to the National Electrical Code and local regulations.
4. (See **Figure 1**) Gently pull knob (A) from Humidifier Control cover (B). Cover is held in place by snap clips. Remove cover by pulling carefully. Do not touch the sensing element.
5. Pull low voltage leads through opening in base plate (D).
6. Attach wires to terminal screws on Humidifier Control. (Note: If wires are "bunched" between Humidifier Control and wall, base plate may become warped or cracked and calibration may be affected.)
7. Remove the gasket (not required for wall mount). Attach base plate with humidistat switch to the wall using two screws (E) and two wall anchors (F), if necessary.
8. Reassemble Humidifier Control cover by snapping back in place. Press on knob.

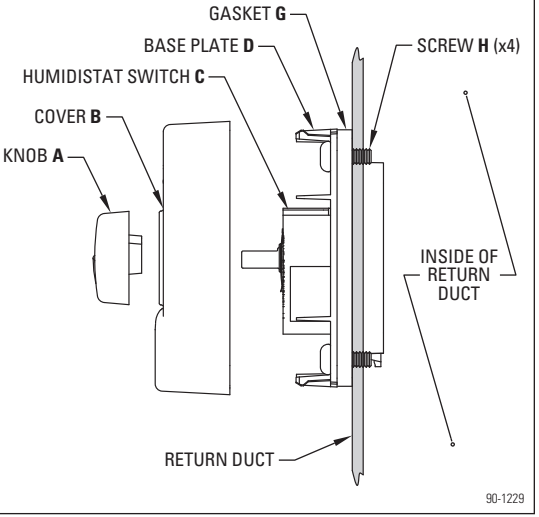
Figure 1 – Wall Mount



Duct (sheet metal) Installation:

1. Select Humidifier Control location on furnace return air duct.
2. Use the attached template to mark the duct opening.
3. Carefully cut the opening in the duct.
4. (See **Figure 2**) Gently pull knob (A) from Humidifier Control cover (B). Cover is held in place by snap clips. Remove cover by pulling carefully. Do not touch the sensing element.
5. Run low voltage leads to control location. All wiring should conform to the National Electrical Code and local regulations.
6. Attach low voltage wires.
7. Make sure that the gasket (G) is in place. Use four sheet metal screws (H) (not provided) to mount the Humidifier Control in the duct opening.
8. Reassemble Humidifier Control cover, guiding the low voltage wires through the cover side opening. Press on knob.

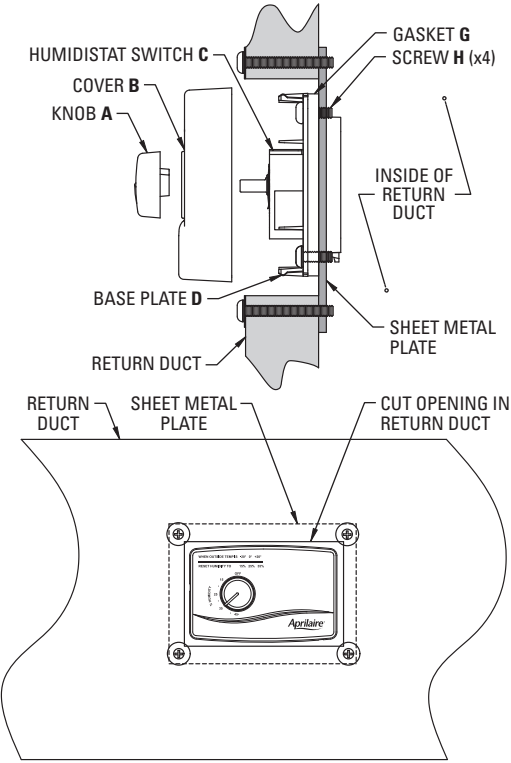
Figure 2 – Sheet Metal Duct Mount



Duct (fiber board) Installation:

1. Select Humidifier Control location on furnace return air duct.
2. Cut a rectangular hole in the duct board, no smaller than 5-3/4 inches long by 3-3/4 inches wide.
3. Cut a rectangular piece of sheet metal to fit behind the hole in duct board for mounting the Humidifier Control.
4. Use the attached template to mark the sheet metal opening for the Humidifier Control.
5. Carefully cut the opening in the sheet metal.
6. (See **Figure 3**) Gently pull knob (A) from Humidifier Control cover (B). Cover is held in place by snap clips. Remove cover by pulling carefully. Do not touch the sensing element.
7. Run low voltage leads to control location. All wiring should conform to the National Electrical Code and local regulations.
8. Attach low voltage wires.
9. Make sure that the gasket (G) is in place. Use four sheet metal screws (H) (not provided) to mount the Humidifier Control in the sheet metal opening.
10. Reassemble Humidifier Control cover, guiding the low voltage wires through the cover side opening. Press on knob.
11. Secure the sheet metal plate inside the duct.

Figure 3 – Fiber Board Duct Mount



SPECIFICATIONS

RANGE . . . . . 15% to 50%

OPERATIONAL DIFFERENTIAL . . . . . 8% RH NOMINAL

DIMENSIONS (Inches)

Length . . . . . 5-1/8"
Height . . . . . 3-3/8"
Depth . . . . . 1-15/16"

ELECTRICAL DATA

SPST Switch
2 wires
24 volts A.C.
Maximum load (contacts) 5.2 amps.

INSTALLATION TEMPLATE

For Use On Sheet Metal Return Plenum

TOP

TEMPLATE SIZE: 4-5/32" x 2-7/16"

1. CUT OUT TEMPLATE ALONG EDGES.
2. PLACE TEMPLATE ON THE SHEET METAL RETURN PLENUM UPSTREAM OF (BEFORE) THE HUMIDIFIER CONNECTION.
3. TRACE OUTSIDE EDGES OF TEMPLATE.
4. REMOVE TEMPLATE AND ACCURATELY CUT OPENING.
5. USING 4 SHEET METAL SCREWS, INSTALL HUMIDIFIER CONTROL IN OPENING.

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