

H808C Convertible Dehumidifier Controller

Application

The H808C Dehumidifier Controller provides automatic low voltage control of dehumidifiers in central heating systems. The humidity controller has an spst, snap-acting, dust-proof switch and is designed for wall or surface duct mounting.

MODELS:

- H808C1029: Premier White™.
- H808C1037: Beige.

ELECTRICAL RATING: 50 VA at 24 Vac.

MAXIMUM AMBIENT TEMPERATURE: 125° F [52° C].

SWITCH DIFFERENTIAL: 5 percent RH, nonadjustable.

SET POINT ADJUSTMENT RANGE: 20 to 80 percent RH; positive ON and OFF positions.

Installation

! CAUTION

1. Installer must be a trained, experienced service technician.
2. Disconnect power supply before beginning installation.
3. Conduct a thorough checkout before leaving installation.

WALL MOUNTING

1. Locate the humidity controller about 5 ft [1.5m] above the floor on an inside wall.

NOTES:

- a. Be sure the humidity controller is subject to average room temperature and average relative humidity. The maximum temperature at the location selected must not exceed 125° F [52° C].
 - b. The humidity controller can be mounted directly on the wall.
2. Drill a small hole in the wall.
 3. Run low voltage wiring to the location and pull about 6 in. [152 mm] of wire through the hole.

NOTE: Plug the opening to prevent drafts from affecting humidity controller operation.

4. Remove the humidity controller assembly by prying with a screwdriver in the notch on the bottom of the case (Fig. 1).

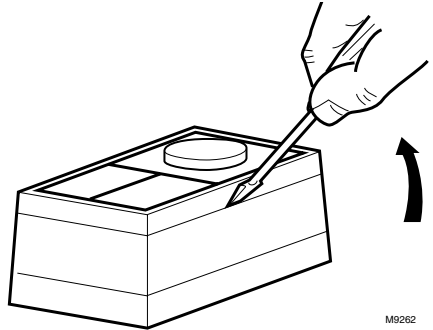
5. Position the case horizontally over the wires with the arrows on the tabs pointing up and secure the case to the wall using the two screws provided.

6. Connect the wires to the humidity controller assembly using leadwires and wire nuts provided (see Wiring section and Fig. 2).

7. Tuck the wires into the bottom of the case.

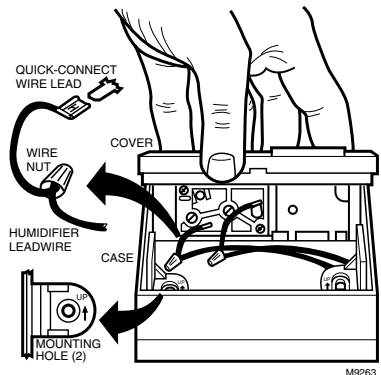
8. Snap the cover assembly into the case (Fig. 2).

Fig. 1—Removing humidity controller assembly from case.



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Fig. 2—Wiring connections on humidity controller.



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DUCT MOUNTING

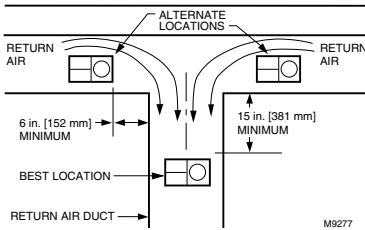
1. Locate the humidity controller at least 8 in. [203 mm] upstream of the humidifier in the return air duct.

NOTE: If mounting near an elbow area, keep the humidity controller 6 in. [152 mm] upstream of the elbow so the element will be affected by the normal airflow (Fig. 3)

2. Using Fig. 4 and the instructions on the template, drill two mounting holes (3/32 in. [2.4 mm]) and 12 sensing holes (1/4 in. [6.4 mm] in diameter) in the duct. (The sensing holes allow return air to reach the nylon sensing element and operate the humidity controller.)

NOTE: If desired, cut a square hole in the duct as indicated on the template in place of the sensing holes.

Fig. 3—Selecting a duct location for the humidity controller.



3. Remove the protective backing from the foam gasket included with each control and apply the foam gasket to the template in the location indicated.

4. Remove the cover and humidity controller assembly from the case by prying with a screwdriver in the notch in the bottom of the case (Fig. 1).

5. Run low voltage wire from the humidity controller to the template (Figs. 5 and 6).

6. Lay wire over one side of the foam gasket allowing about 6 in. [152 mm] for connection to the humidity controller. Wire can enter the humidity controller case from any direction.

NOTE: Do not position wire directly under the two stand-off projections at the back of the case. If wire is under these projections, the case will not seat tightly against the gasket, causing air leakage and possible improper operation.

7. While holding wire in place, mount the case on the duct using the two mounting screws provided.

NOTE: Tighten the screws firmly so the gasket seals the space between the case and the duct (Fig. 4).

8. Connect the wires to the humidity controller assembly using leadwires and wire nuts supplied (see Wiring section and Fig. 2).

9. Snap cover assembly into the case.

Fig. 4—Mounting humidity controller on return air duct.

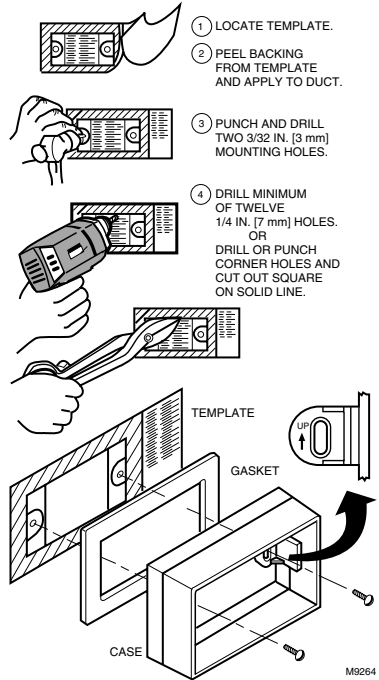


Fig. 5—Typical parallel wiring diagram of H808C with T87F/Q539A combination for dehumidification and mildew control.

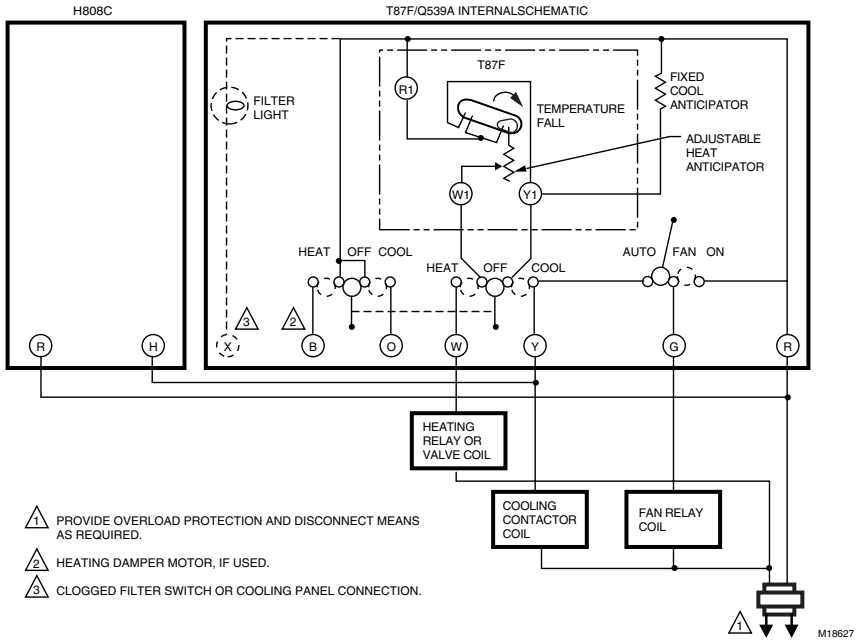


Fig. 6—Typical series wiring diagram of H808C with T87F/Q539A combination for dehumidification and mildew control.

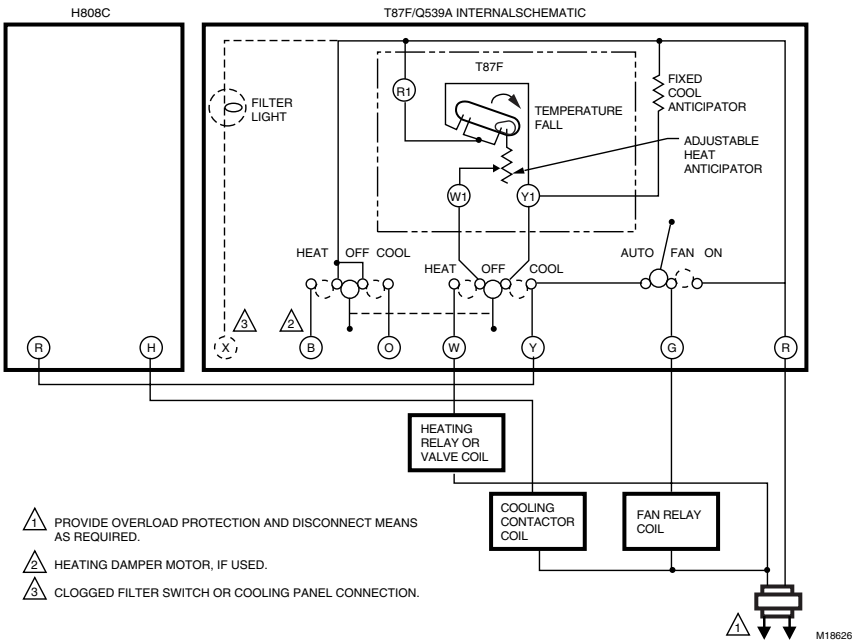
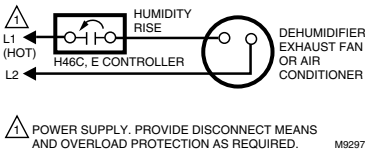


Fig. 7—Typical wiring diagram for H46C,E.



WIRING

All wiring must comply with local codes and ordinances. Make wiring connections according to dehumidifier instructions if available; otherwise, see typical wiring diagrams in Figs. 5 and 6.

Settings

HUMIDITY CONTROLLER ADJUSTMENT

The humidity comfort range of a living space is generally between 25 and 50 percent RH. However, as the outdoor temperature changes, the humidity level on the humidity controller may need to be reset to assure maximum comfort.

To reduce the relative humidity, reduce the set point approximately three percent RH every 24 hours. To increase the relative humidity, increase the set point approximately three percent RH every 24 hours.

WALL MOUNT HUMIDITY CONTROLLER

Set the humidity set point according to the prevailing outdoor temperature to provide optimum relative humidity control for most installations. Adjust the humidity level to a particular structure using the procedure above.

DUCT MOUNT HUMIDITY CONTROLLER

If the temperature at the humidity controller location on the return air duct is less than 80° F [27° C], use the procedure for wall mounted humidity controllers.

If the air surrounding the humidity controller is greater than 80° F [27° C], reset the recommended settings to compensate for the higher ambient temperature. High ambient temperatures will cause the humidity controller to control at an increased setting. To determine the compensated set point for surface mounted humidity controllers with high ambient temperatures, use the following procedure:

1. With a bulb type thermometer, accurately determine the surrounding duct temperature at the humidity controller location.

2. Decrease the recommended setting about five percent for each 5° F [3° C] above 80° F [27° C] at the humidity controller.

For example, if the humidity controller is set at 25 percent and the temperature at the humidity controller is 90° F [32° C], the compensated set point should be 15 percent. (This is the 25 percent setting less 10 percent for the 10° F [6° C] above ambient temperature.)

Checkout

Place the system in operation and observe through at least one complete cycle to make certain that all components are functioning properly.

Honeywell

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