

AprilAire[®]

Thermostat

SPECIFICATION SHEET
Model 8840
 Automation IAQ Control



MODEL 8840 FEATURES & BENEFITS

- Wi-Fi with IAQ Control
- Event-Based™ Air Cleaning
- Fresh air ventilation: timed or ASHRAE
- Color touch screen
- 3-wire design
- Maintenance reminders
- Heat Blast™ schedule override

WORKS WITH ALL MAJOR HOME AUTOMATION SYSTEMS



Equipment Control Module

APRILAIRE AUTOMATION IAQ CONTROL

The AprilAire Automation IAQ Control Thermostats consist of two components, the User Interface and the Equipment Control Module. The User Interface, located in the living space, integrates all indoor air quality functions – heating/cooling, humidification/dehumidification, air cleaning and ventilation in one attractive, easy-to-use, touch screen control. The User Interface offers homeowners the ability to easily set all of their IAQ and HVAC products from one location in the living space. The primary screen indicates how to easily activate and control set points. In addition, the display provides the homeowner with confirmation that the equipment is operating at the desired control settings.



Intuitive User Interface
8840

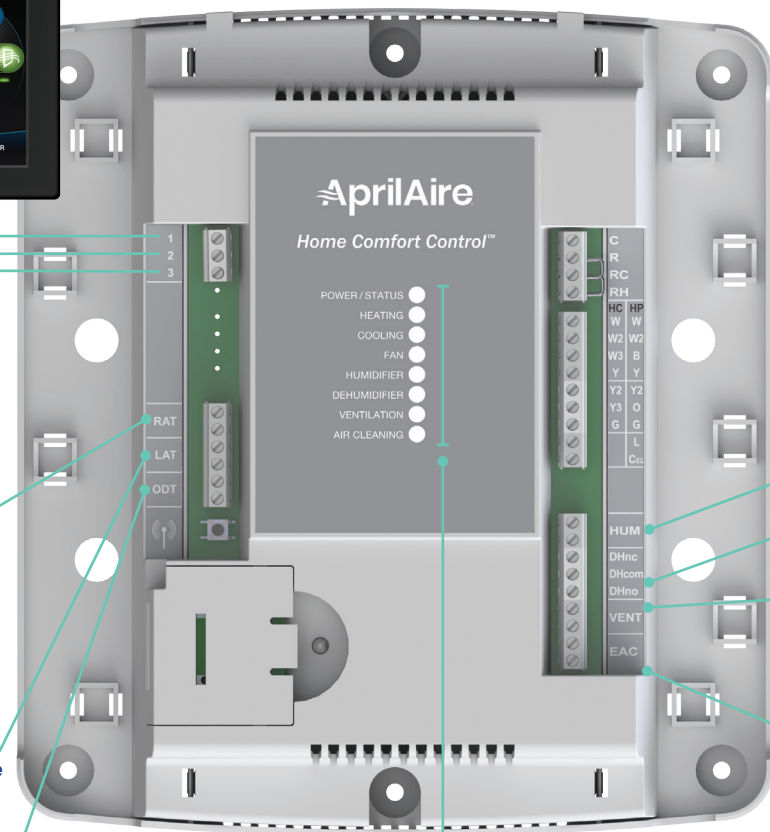


3-Wire Connection Between User Interface and Equipment Control Module

Optional Return Air Temperature Sensor (RAT) provides protection with heating and cooling back-up control if connection is lost.

Optional Leaving Air Temperature Sensor (LAT) provides the supply air temperature during the installer test.

Included – Wired Outdoor Temperature Sensor 8052 (ODT)



8 LEDs indicate HVAC Equipment and IAQ Accessory Status

IAQ Control Features

TEMPERATURE CONTROL

- Universal Programmable Thermostat - 3H/3C Conventional or 4H/2C Heat Pump
- 7 day (4 events/day) or non-programmable
- Dual fuel operation
- High and low balance points (must use ODT)
- Screen lock-out to prevent unauthorized adjustments
- Adjustable differential for all stages
- Stage rate control uses equipment run time to control HVAC equipment staging
- Progressive Recovery feature ensures that the setpoint is reached by the scheduled time

HUMIDITY CONTROL

Humidifier

- Displays indoor RH on User Interface
- Notifies when humidifier is active
- Automatic humidity setpoint adjustment (must use ODT) or Manual Control
- Water Panel® replacement reminder
- Use with (optional) model 8082 Remote Temperature/RH Sensor for remote RH sensing or sensor averaging

Dehumidifier

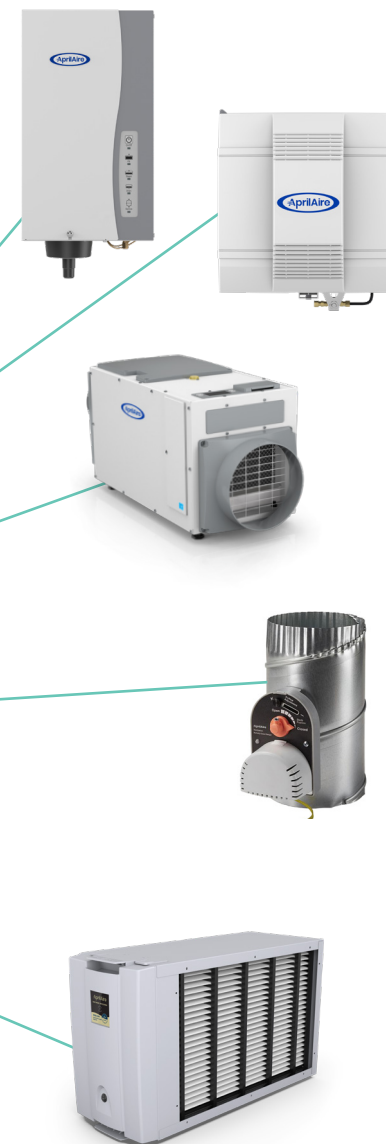
- Displays indoor RH on User Interface
- Notifies when dehumidifier is active
- Operates whole-home dehumidifier
- Dehumidifier service reminder
- Energizes HVAC blower when dehumidifying

FRESH AIR VENTILATION

- Provides fresh air with a motorized damper or an ERV/HRV
- Notifies when ventilation is active
- Control limits based upon outdoor temperature and RH
- Can be set up to use ASHRAE 62.2 guidelines or timed ventilation

AIR CLEANING

- Event Based™ Air Cleaning - 4 selectable air cleaning events
 - Constant Cleaning (24/7)
 - Automatic (30 Min/Hr)
 - Event Clean (3 Hr Cycle)
 - Allergy (24 Hr Cycle)
- Notifies when air cleaning is active
- Media replacement reminder
- Controls EAC with dedicated 24 VAC dry contact



Automation IAQ Controls

EASY TO INSTALL & MAINTAIN

- Dual fuel operation (auto lockout of compressor w/call for back-up heat)
- Programmable (or non-programmable)
- Remote indoor sensor option w/8051/8053 sensors
- Temperature offset $\pm 4^{\circ}$
- High and low balance point control (requires 8052 sensor included)
- 3H/3C conventional and 4H/2C heat pump
- Configurable manual heat/cool or auto changeover modes
- Configurable for heating only or cooling only operation
- Large, easy-to-wire terminal block
- Adjustable differential for 1st, 2nd, 3rd and 4th stages
- Service reminders
 - Humidifier, Air Cleaner,
 - Dehumidifier, Ventilation, HVAC

ENGINEERED FOR EXCELLENCE

- Circulate fan mode
- Programmable fan
- Progressive recovery
- Built-in equipment protection
- Equipment stage indication
- Multiple hold options maximizes comfort and energy savings
 - Vacation hold
 - Customizable temporary hold
 - Permanent hold
- Permanent memory — programming, time and date isn't lost during a power outage
- Heat Blast™ allows one touch control of heating to raise room temperature 3°F to 5°F
- 5-year warranty

EASY & CONVENIENT TO USE

- 7" diagonal touch screen
- Large font size
- Fully back lit w/ constant low intensity light option
- Exclusive message center (provides feedback and real language instructions)
- Displays outdoor temperature (w/included 8052 sensor)
- Real language programming/set up — no manual needed, no codes to memorize
- Full or limited screen lockout
- "Copy" function for quick and easy programming
- Real time clock automatically adjusts for daylight savings time
- Can be configured for use with the AprilAire Healthy Air app when no home automation system is installed.

DIMENSIONS

Thermostat

7.13" x 4.38" x 1.13"

User interface

7.1" x 4.4" x 1"

Equipment control module

8.6" x 9.6" x 1.9"

Accessories

- 8052 Outdoor Temperature Sensor (included)
- 8051 Flush Mount Indoor Temperature Sensor (optional)
- 8053 Surface Mount Indoor Temperature Sensor (optional)
- 8082 Temperature and RH Support Module
- 8083 Flush Temperature/RH Support Module
- Return Air Temperature Sensor (RAT) optional sensor provides protection with heating and cooling back-up control if connection is lost
- Leaving Air Temperature Sensor (LAT) optional sensor provides the supply air temperature during the installer test

THERMAL SPECIFICATIONS

Control range:

40° to 99°F (4° to 32°C)

Display range:

32° to 99°F (0° to 40°C)

Accuracy: $\pm 1^{\circ}\text{F}$ ($\pm .5^{\circ}\text{C}$)

Storage temperature:

-30° to 140°F

(-34.4° to 60°C)

Operating humidity:

5% to 90% relative humidity non-condensing

Operating ambient temperature of user interface:

32° to 120°F (0° to 48.9°C)

Operating ambient temperature of ECM:

32° to 158°F (0° to 70°C)

Shipping temperature range:

-30° to 140°F (-34.4° to 60°C)

ELECTRICAL SPECIFICATIONS

• 24 VAC powered (18-30 VAC)

• 1 amp maximum load per terminal

• 2.5 amp total maximum load (all terminals)

Terminal Designations:

• User interface: 1, 2, 3, T₁, T₂, RSA, RSB

• Equipment control module: 1, 2, 3, RAT, LAT, ODT, C, R, RC, RH, W, W2, W3/B, Y, Y2, Y3/O, G, L, CEQ, HUM, DHNO, DHNC, DHCOM, VENT, EAC

