

# Aprilaire®

## Automation IAQ Controls



Model  
8840  
Shown

### Programmable



#### 8830

Universal 3H/3C or 4H/2C HP  
Event-Based™ Air Cleaning  
Humidity and Ventilation  
2 Part — 3-wire design  
Touch screen



#### 8840

Universal 3H/3C or 4H/2C HP  
Event-Based™ Air Cleaning  
Humidity and Ventilation  
2 Part — 3-wire design  
Full color touch screen

### 8830 and 8840 Series Features & Benefits



- ✓ Wi-Fi with IAQ Control
- ✓ Event-Based™ Air Cleaning
- ✓ Fresh air ventilation: timed or ASHRAE
- ✓ Color touch screen: **Model 8840**
- ✓ 3-wire design
- ✓ Maintenance reminders
- ✓ Heat Blast™ schedule override
- ✓ Works with all major home automation systems

Intuitive User Interface  
8840

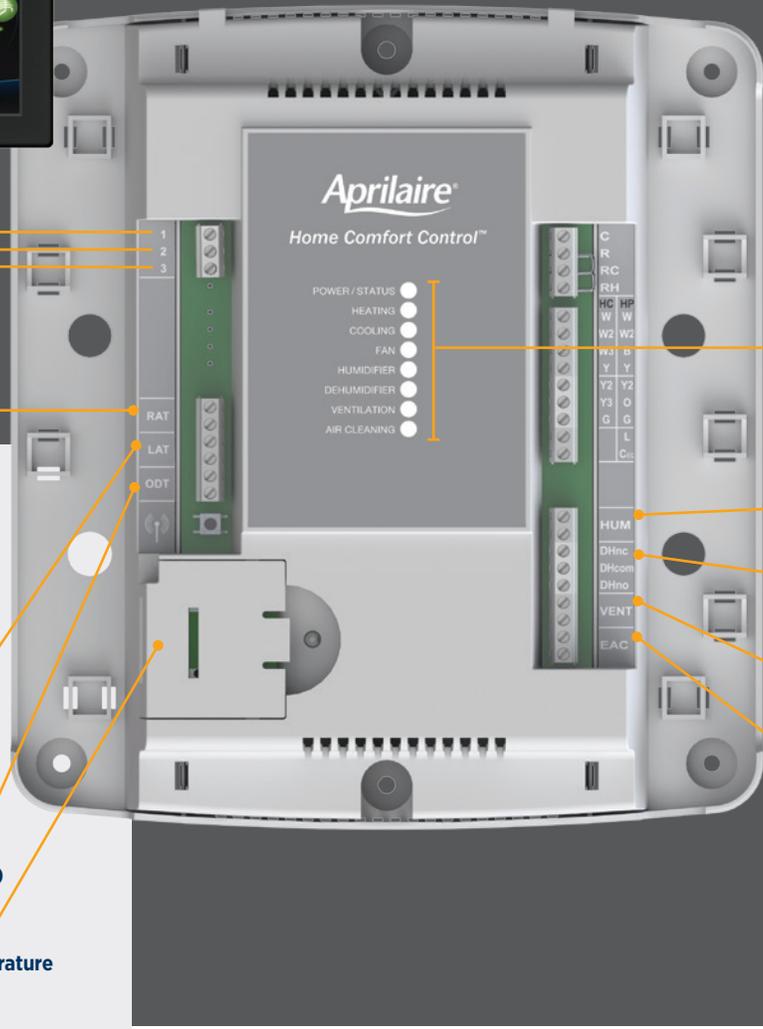


# Equipment Control Module



8830

3-Wire Connection



8 LEDs indicate HVAC Equipment and IAQ Accessory Status

**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 and RH Sensor 8052 (ODT)**

Optional **Wireless Outdoor Temperature and RH Sensor 8056 (ODT)**



## 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.

# 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
- + Heat Blast™ allows one touch control of heating to raise room temperature 3°F to 5°F



## 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 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> 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

- + 4.5" diagonal touch screen Model 8830
- + 7" diagonal touch screen Model 8840
- + 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 or optional 8056 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

### Dimensions

#### User interface

6" x 4.85" x 1.25" Model 8830  
7.1" x 4.4" x 1" Model 8840

#### 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)

8056 Wireless Outdoor Temperature and RH Sensor (optional)

8081 Temperature Support Module

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)

Standard systems gas, oil, electric

Single stage/heat pump/multi-stage

#### Terminal Designations:

**User interface:** 1, 2, 3, T<sub>1</sub>, T<sub>2</sub>, 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