

Aprilaire® Model #8521 Smart Thermostat



Aprilaire® Model # 8521 is a smart programmable thermostat designed for demand management programs based on temperature rise. It is equipped with a Verizon 3G certified radio for high-reliability two-way communications. For temperature rise programs, our Connected Energy® demand management system sends a signal to the smart thermostat to implement the temperature setback feature, increasing the thermostat setpoint. Load is reduced until the premises temperature rises to the new, higher setpoint. Following the event, the temperature setpoint returns to its programed value.

Key Features:

- Verification that the HVAC system is participating
- Enables temperature rise programs
- Two-way, near-real time communications
- Closed-loop comfort control

Product Specifications¹

Input Power Requirements

- Thermostat Voltage 24 Volts ± 20% (19-29); AC or DC
- Total Load Current 5 A
- Single Output Load Current 2 A

Thermal Specifications

- Operating Range 32 °F - 99 °F (0 °C - 37 °C)
- Display Accuracy ± 1 °F between 60 °F and 80 °F
± 2 °F outside this range
- Control Accuracy ± 1 °F
- Control Range - Heat 40 °F - 88 °F (4 °C - 30 °C)
- Control Range - Cool 42 °F - 90 °F (6 °C - 32 °C)
- Heat/Cool Deadband Adjustable 2 °F - 5 °F
- 1st Stage Differential Adjustable 1 °F - 4 °F (1 °F default)
- 2nd Stage Differential Adjustable 1 °F - 4 °F (1 °F default)
- Temperature Offset Adjustable 1 °F - 4 °F

Physical Specifications

- Dimensions (H x W x D) 4.25" x 5.75" x 1.25"
108 x 146 x 32 mm
- Weight 0.6 lbs. /0.3 kg

Consumer Features

- Display - Event Notifications
 - Countdown of the Event
 - Event Completion
 - Return to Normal
- Opt-Out
 - Opt-out for Day
 - Opt-out of Event in Progress
- Basic Thermostat
 - 7-Day programmable/4 timed heating and cooling changes per day
 - User friendly menu style programming
 - Compatible with virtually all types of HVAC equipment
 - Secure web access provides complete control of thermostat
 - Opt-out of Event in Progress

Certifications/Standards

- UL Listed
- FCC Certified
- ISO Compliant
- Verizon Network Certified
- IEC 61000-4-2 safety rated to class 3

Communications

- Standard Dual-band CDMA 800/1900 MHz
Built in UDP/TCP/IP stack
- Optional Radio Mesh Networks
3rd Party Radios

1) Specifications are subject to change without notice.