

## IMPORTANT ADDENDUM

**Please read and replace the information provided with the respective pages found in the Model 8800 Thermostat and Model 8800 System Installation manuals.**

The Model 8800 communicating thermostat and Model 8819 distribution panel have been modified to provide enhanced compatibility with various power supplies and grounding schemes. Please follow the instructions provided in this addendum to properly install and configure these new products.

**These changes effect the 8800 system in three main ways:**

- 1.** Power for the thermostat is now derived from the Model 8819 or separate 24VAC transformer (same as the Model 8870/8818 was) instead of the HVAC equipment.
- 2.** The heat pump fault indicator feature has been removed from this product to make room for the new terminal layout.
- 3.** The 8800 can now operate with dry contacts in humidistat mode without the use of a 8024.

If you experience any difficulty with these instructions or the installation of scenarios not discussed in this document, please contact Aprilaire® Technical Support at (888) 782-8638. Office hours are Monday through Friday, 7:00 a.m. – 5:00 p.m. Central Standard Time.

### ADDITIONAL NOTES:

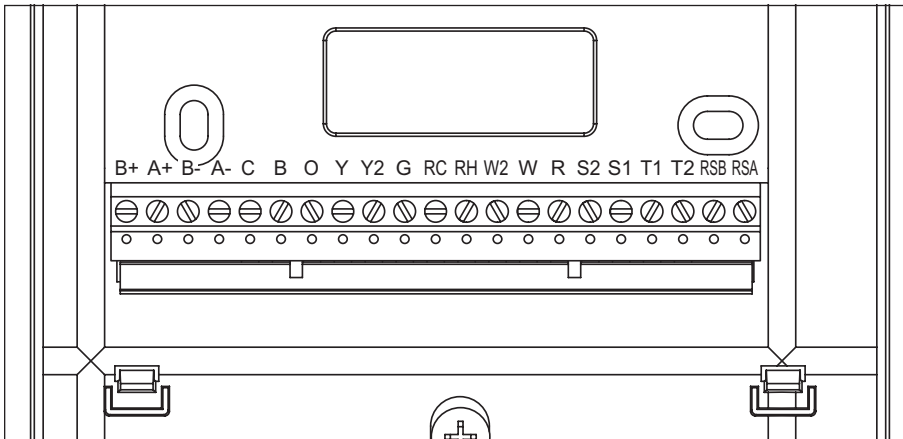
**When replacing an 8870 Thermostat with the model 8800 Thermostat these additional steps are required in order for proper operation.**

- 1.** Replace any 8061 TT Support Modules connected to the thermostat with 8081 TT Support Modules, but in cases where a single flush mount and/or outdoor sensor is used they can be directly connected to the new 8800 Thermostat and the Support Module can be eliminated.
- 2.** Replace any 8062 TrH Support Modules connected to the thermostat with 8082 TrH Support Modules.

Replaces page 4 of the 8800 Thermostat Installation manual.

## INSTALLATION

### WIRING TERMINAL



#### Wire specifications:

- 18-24 gauge thermostat wire
- CAT-5 or equivalent for communication terminals

#### Installation notes:

- Ensure power at the HVAC equipment is off.
- Loosen screw terminals, insert stripped wire and re-tighten.
- Push the excess wire back into the opening and plug the wall opening to prevent drafts.

**Note:** If the HVAC system was installed before the automation system, the HVAC installer may have powered the thermostat connecting a wire to the **C** terminal and installing a jumper wire from the **R** terminal to **RH** or **RC**. When used with an automation system, the **R** and **C** terminals on the Model 8800 thermostat should only be connected to the same terminals on the 8819 or a dedicated 24VAC transformer. There should be no connection to the **R** or **C** terminals coming from the HVAC equipment.

- B+ / B-** – Receive communication terminal (reference automation system)<sup>1</sup>
- A+ / A-** – Transmit communication terminal (reference automation system)<sup>1</sup>
- C** – 24VAC Thermostat power (common) from 8819
- R** – 24VAC Thermostat power (hot) from 8819
- B** – Reversing valve for heat<sup>2</sup>
- O** – Reversing valve for cool<sup>2</sup>
- Y** – 1st stage cooling / compressor or dehumidifier<sup>3</sup>
- Y2** – 2nd stage cooling / compressor
- G** – Fan
- RC** – 24VAC supply cooling<sup>4</sup>
- RH** – 24VAC supply heating<sup>4</sup>
- W2** – 2nd stage heat / auxiliary / E-Heat
- W** – 1st stage heat / auxiliary / E-Heat / humidifier<sup>3</sup>
- S1 & S2** – outdoor temperature sensor (optional)
- T1 & T2** – remote temperature sensor (optional)
- RSA & RSB** – 8081 or 8082 Support Module communication (half duplex)<sup>5</sup>

<sup>1</sup>Refer to Aprilaire HVAC Automation System Installation Manual for communication wiring details.

<sup>2</sup>O and B terminals are both de-energized when system mode is OFF or in AUTO when the heating and cooling equipment is idle.

<sup>3</sup>When the unit is configured for humidistat mode.

<sup>4</sup>Jumper between RC & RH is used in single transformer systems (see wiring diagrams).

<sup>5</sup>Refer to Support Module literature for wiring details.

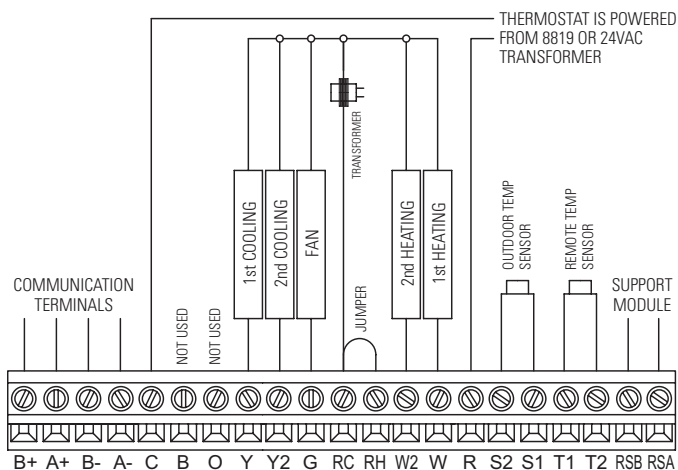
Replaces page 5 of the 8800 Thermostat Installation manual.

Replaces page 7 of the 8800 System Installation manual.

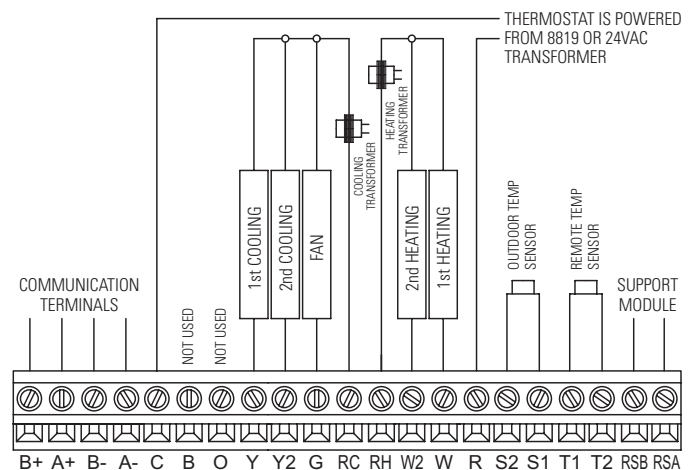
## INSTALLATION

### CONVENTIONAL HEAT/COOL

#### SINGLE TRANSFORMER (USE JUMPER WIRE)



#### TWO TRANSFORMERS (REMOVE JUMPER WIRE)

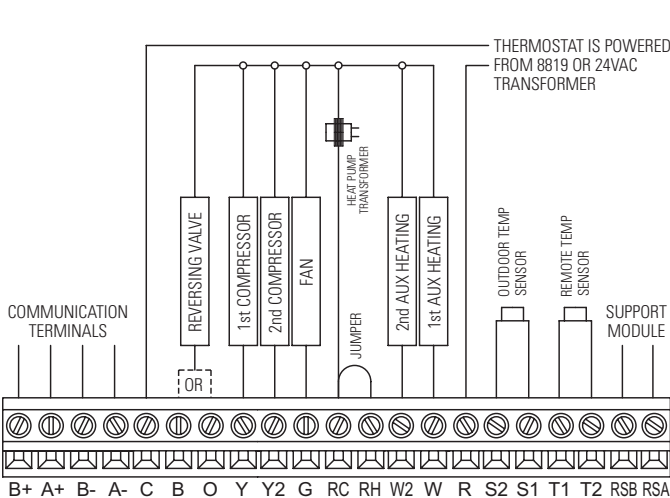


Replaces page 6 of the 8800 Thermostat Installation manual.  
Replaces page 7 of the 8800 System Installation manual.

INSTALLATION

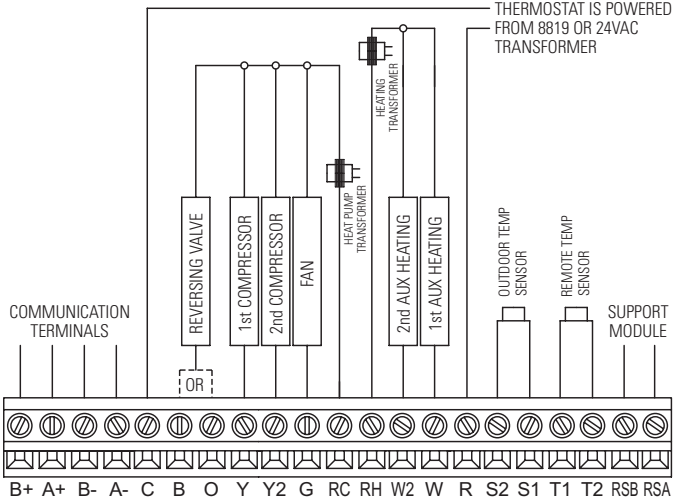
HEAT PUMP

SINGLE TRANSFORMER (USE JUMPER WIRE)



NOTE: "O" is active in cooling and "B" is active in heating.

TWO TRANSFORMERS (REMOVE JUMPER WIRE)



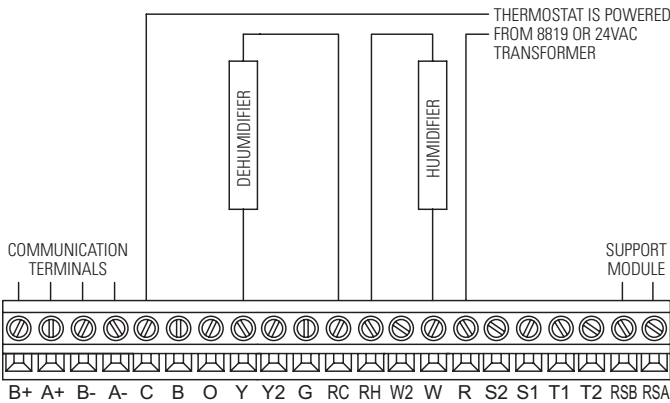
NOTE: "O" is active in cooling and "B" is active in heating.

Replaces page 7 of the 8800 Thermostat Installation manual.  
Replaces page 7 of the 8800 System Installation manual.

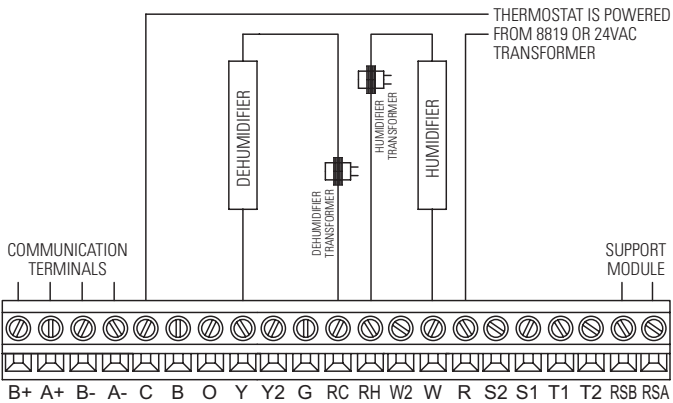
INSTALLATION

HUMIDISTAT

DRY CONTACT



POWERED CONTACT

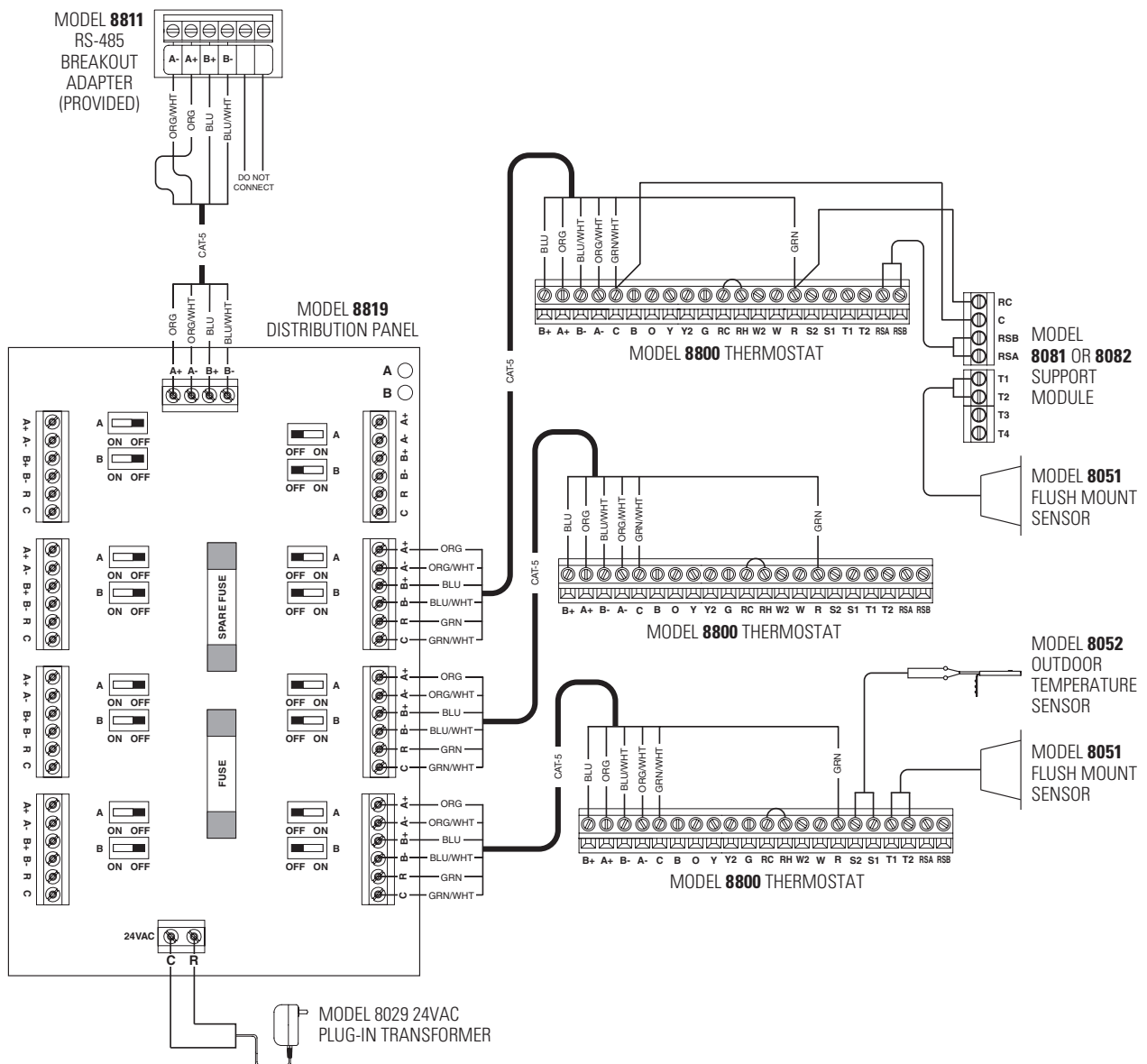


Replaces page 8 of the 8800 System Installation manual.

## CONNECT THE COMMUNICATION AND POWER WIRES TO THE DISTRIBUTION PANEL AND THERMOSTAT

1. **MAKE SURE THAT ALL SWITCHES ON THE DISTRIBUTION PANEL ARE OFF!**
2. Connect the communication wires. **FIGURE 6** shows how each thermostat is to be wired to the distribution panel.
  - Use the wire colors shown in **FIGURE 6** to help ensure proper, consistent connections.
3. Use a Model 8029 24VAC transformer or equivalent to power each distribution panel.

**FIGURE 6 – System Communication Wiring**



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