

In order to use this furnace in full communications (COMM) mode, it MUST be installed with the matching touch-screen Communicating Control (wall thermostat) and an outdoor air conditioner or heat pump with a fully communicating control.

This furnace may be used with the Communicating Thermostat Control and a non-communicating outdoor air conditioner by installing the AC Communicating Control Board Kit to the outdoor unit. This system allows full communication between the furnace and thermostat and limited communication to the outdoor unit. See Figure 18.

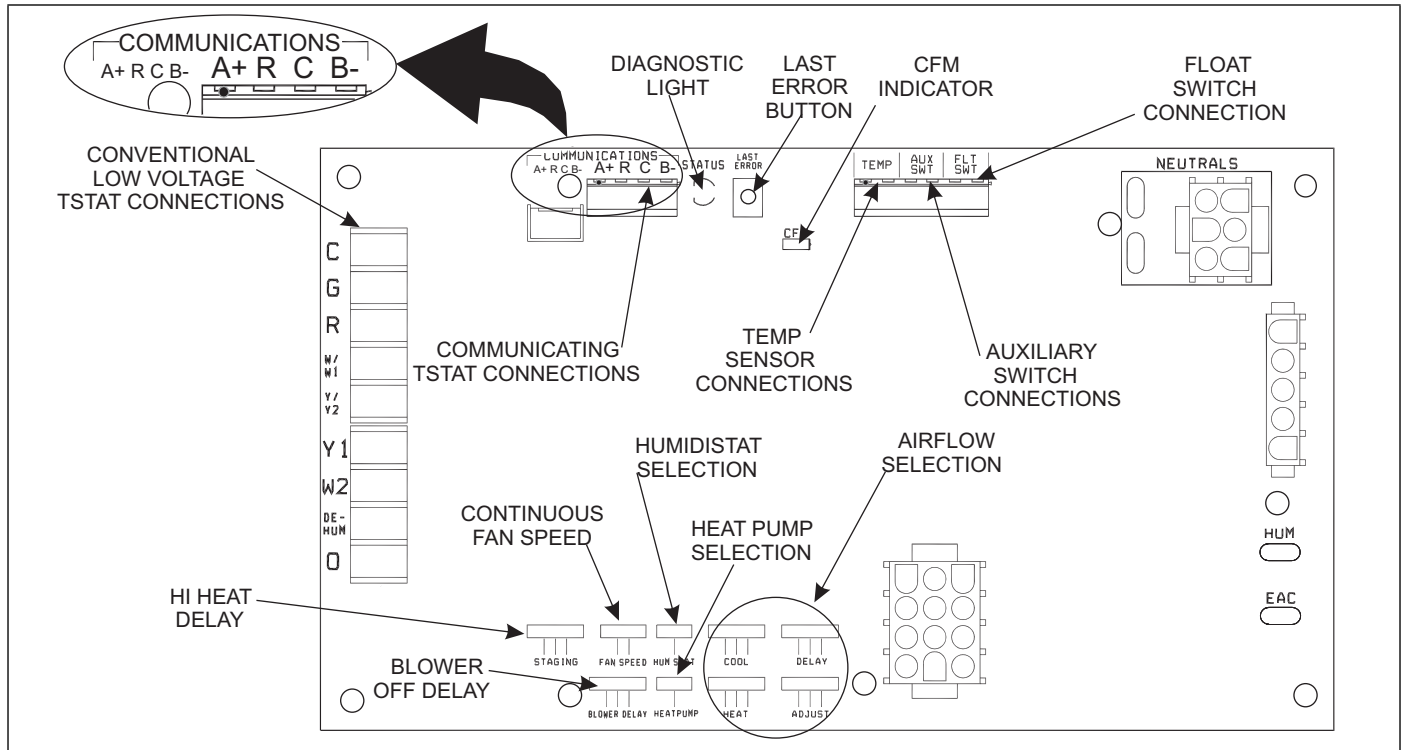


FIGURE 17: Furnace Control Board – Communications Connections

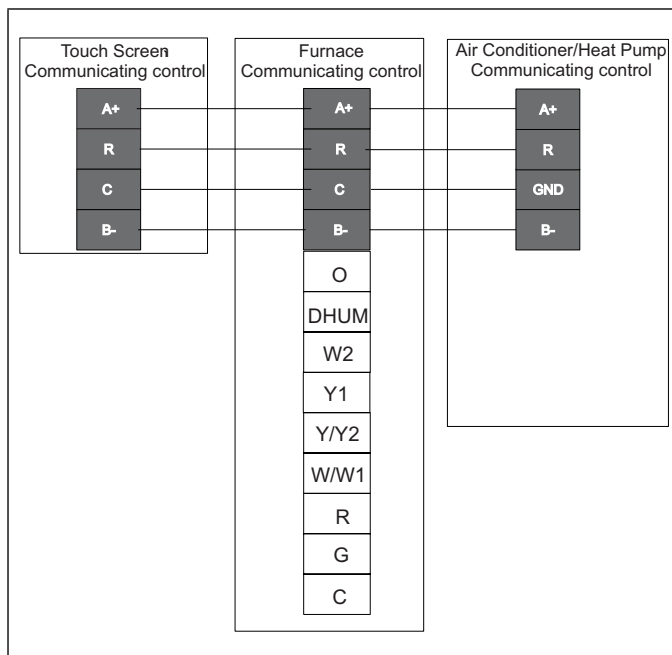


FIGURE 18: Two-stage Furnace with Communicating AC or HP

CONTROL WIRING USING COMMUNICATING CONTROLS

Use the wiring diagram above to connect the furnace control, Communicating Control (wall thermostat) and communicating outdoor unit. Be sure that all of the “A” terminals are connected together, all of the “B” terminals are connected together, all of the “GND” or “C” terminals are

connected together and all of the “R” terminals are connected together. See Figure 18. When using a fully communicating system, the large screw terminals (C, G, R, etc.) on the furnace control are not used. The four small screw terminals in the terminal block on the end of the furnace control should be used.

Float Switch Input

An optional switch may be connected to the FLT SWT terminals on the control board. This feature is only functional when used with the Communication Control. It is intended for use with a water overflow switch.

Auxiliary Switch Input

An optional switch may be connected to the AUX SWT terminals on the control board. This feature is only functional when used with the Communication Control. Refer to Communication Control Installation Manual.

LOW VOLTAGE CONTROL WIRING CONNECTIONS

Install the field-supplied thermostat by following the instructions that come with the thermostat. With the thermostat set in the OFF position and the main electrical source disconnected, connect the thermostat wiring from the wiring connections on the thermostat to the terminal board on the ignition module, as shown in Figures 20-23. Electronic thermostats may require the common wire to be connected. Apply strain relief to thermostat wires passing through cabinet. If air conditioning equipment is installed, use thermostat wiring to connect the Y and C terminals on the furnace control board to the proper wires on the condensing unit (unit outside).

IMPORTANT

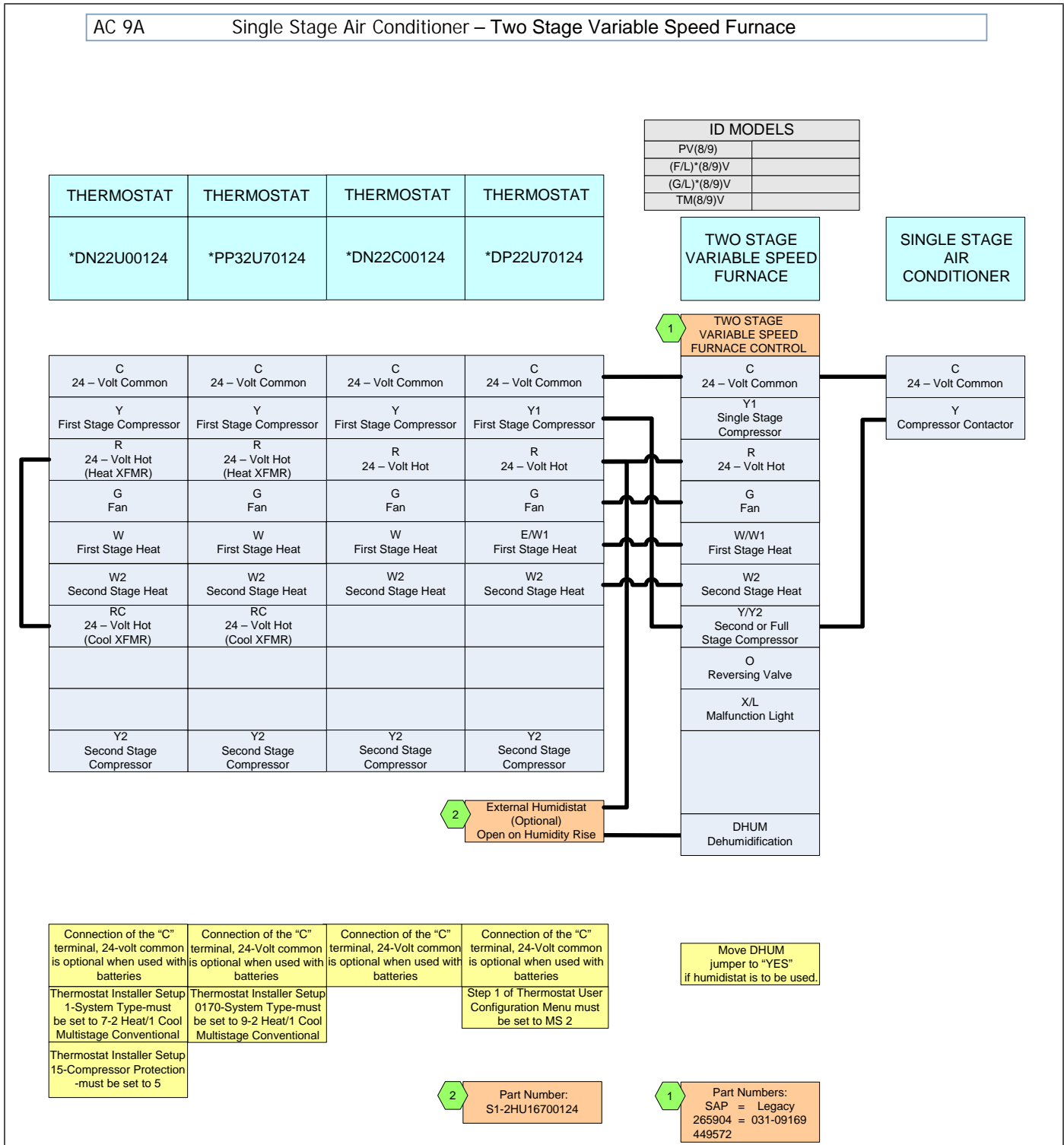
Set the heat anticipator in the room thermostat to 0.4 amps. Setting it lower will cause short cycles. Setting it higher will cause the room temperature to exceed the set points.

IMPORTANT

Some electronic thermostats do not have adjustable heat anticipators. They should be set to six cycles per hour. Follow the thermostat manufacturer's instructions.

The 24-volt, 40 VA transformer is sized for the furnace components only, and should not be connected to power auxiliary devices such as humidifiers, air cleaners, etc. The transformer may provide power for an air conditioning unit contactor.

For additional connection diagrams for all UPG equipment refer to "Low Voltage System Wiring" document available on-line at www.upgnet.com in the Product Catalog Section.



HP 15A Single Stage Heat Pump – Two Stage Variable Speed Furnace (Hot Heat Pump or Conventional)

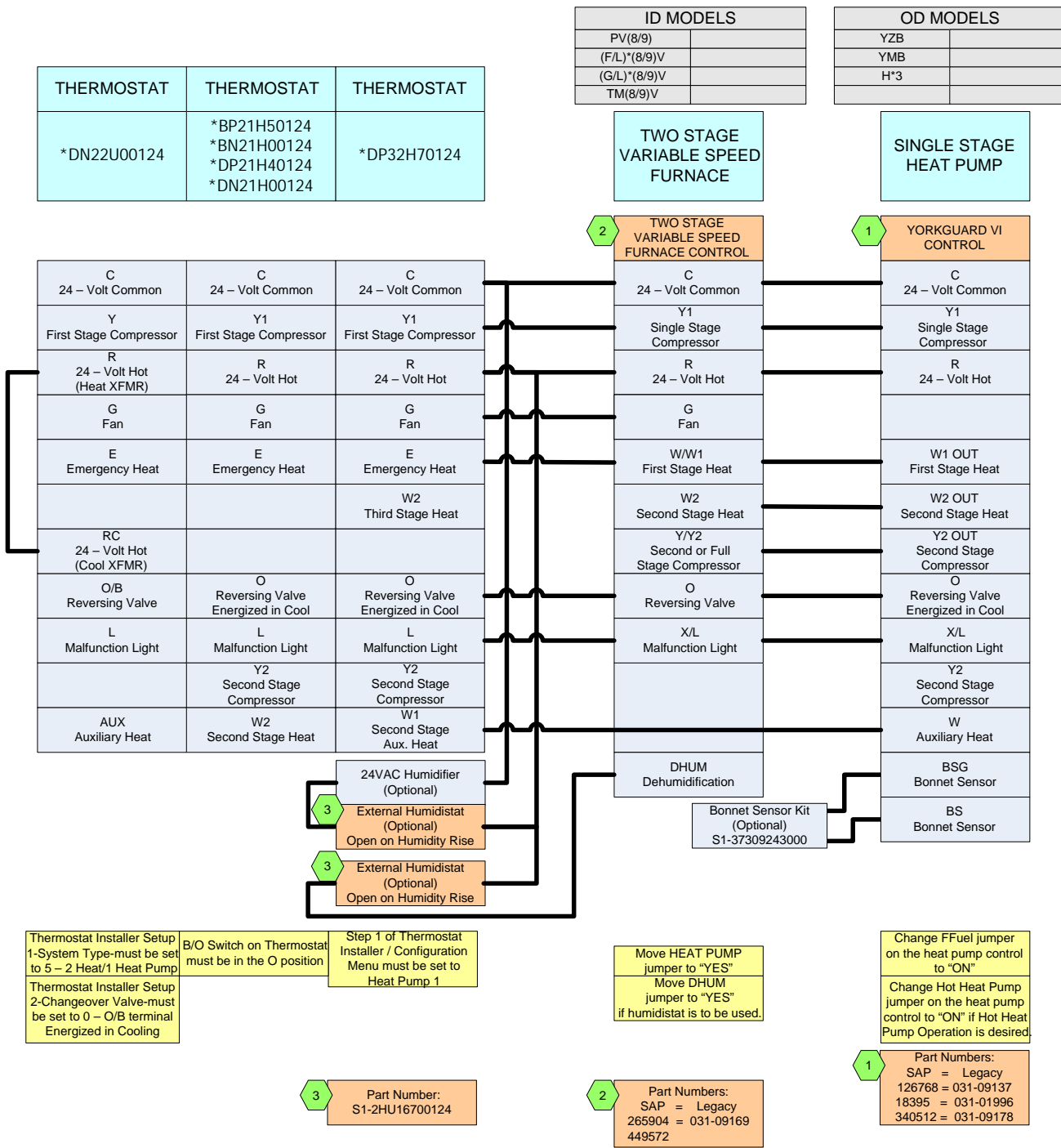


FIGURE 20: Thermostat Chart - Single Stage Heat Pump with Two Stage Variable Speed Furnace (Hot Heat Pump or Conventional)

AC 24C Two Stage Air Conditioner – Two Stage Variable Speed Furnace

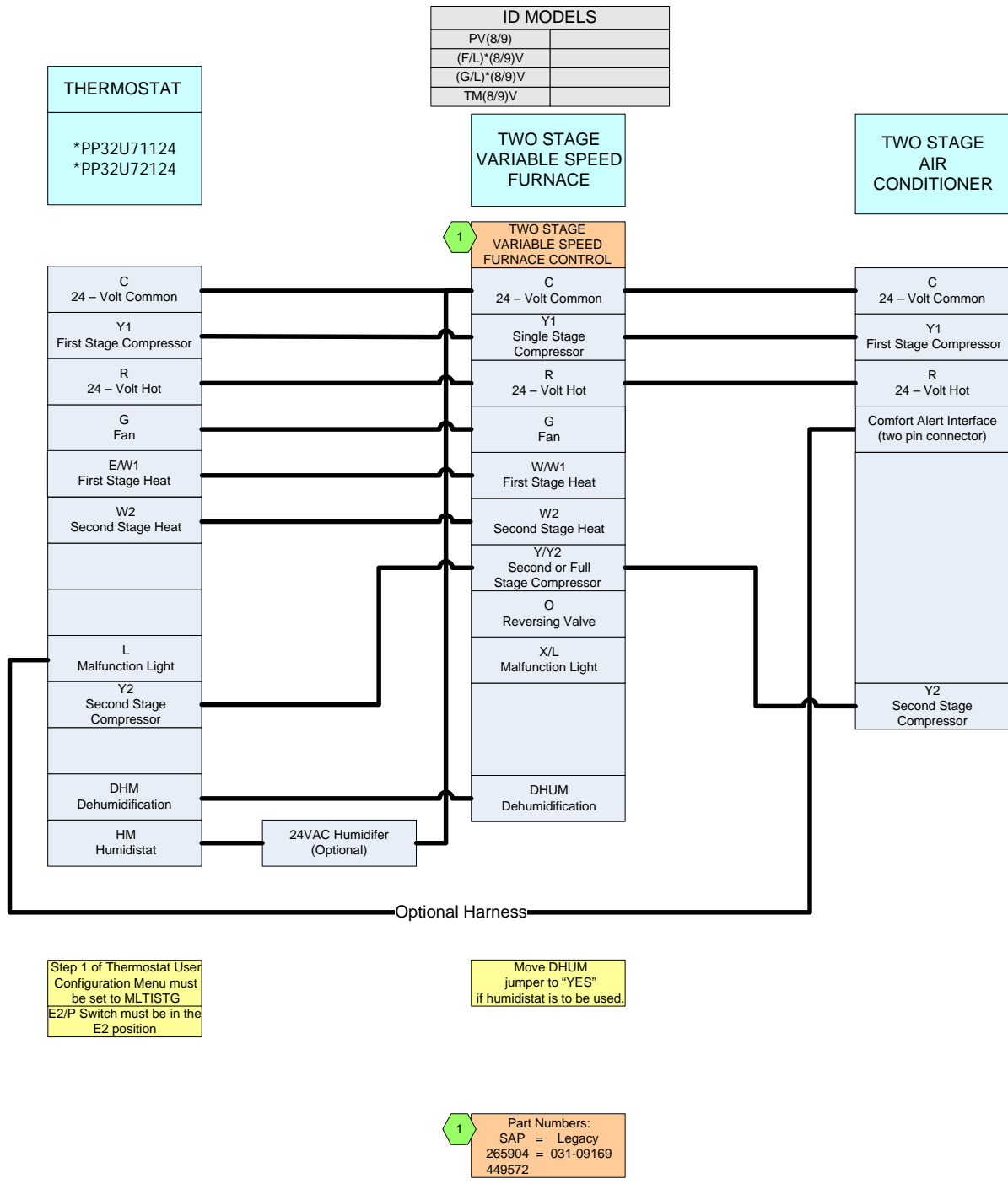


FIGURE 21: Thermostat Chart - Two Stage AC with Two Stage Variable Speed Furnace

HP 24A Two Stage Heat Pump – Two Stage Variable Speed Furnace (Hot Heat Pump or Conventional)

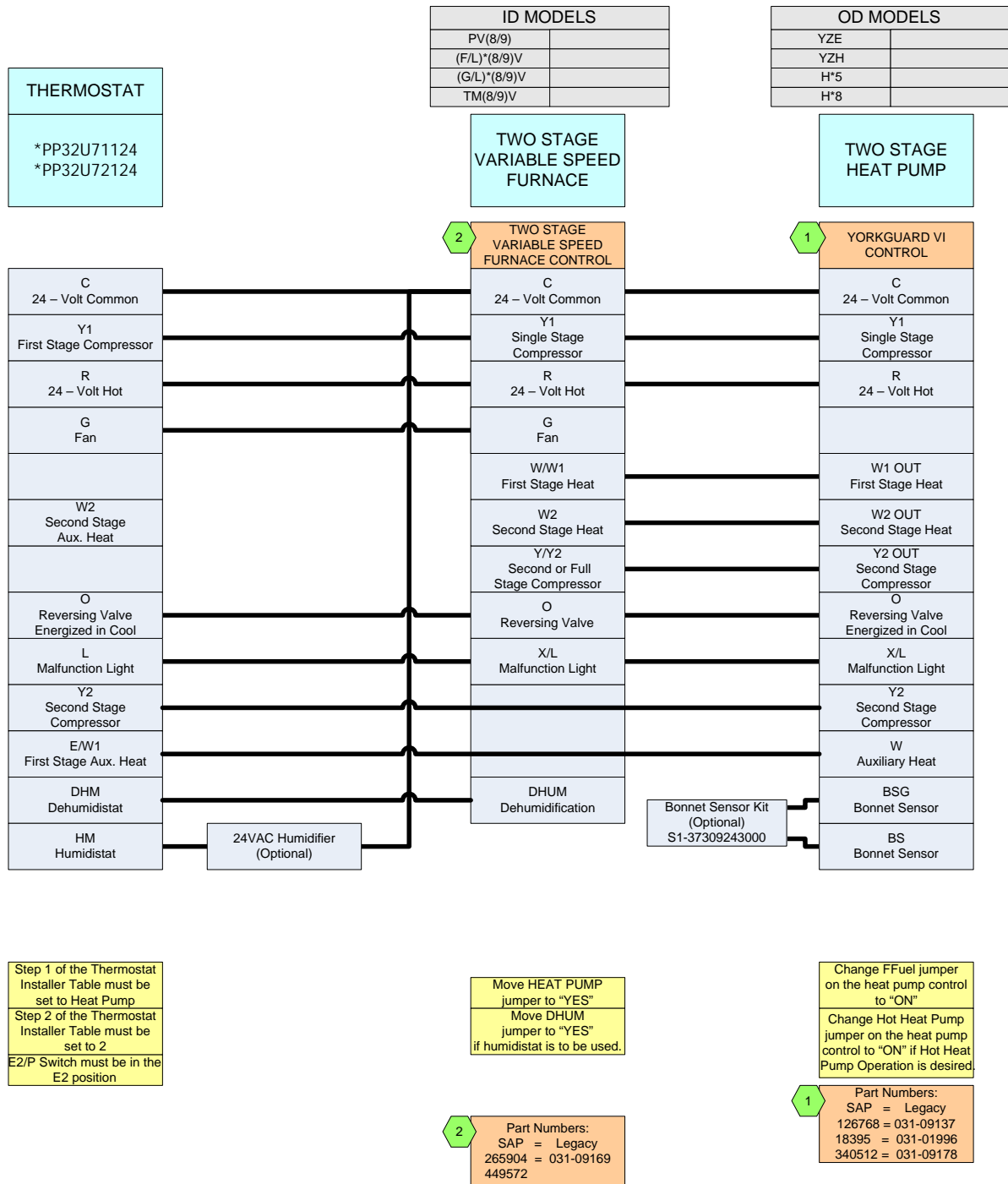


FIGURE 22: Thermostat Chart - Two Stage HP with Two Stage Variable Speed Furnace (Hot Heat Pump or Conventional)