September, 2006

INSTALLATION INSTRUCTIONS
solid-state speed controller steam/hot water unit heaters

DANGER

Appliances with Power Code 01 must not be installed where they may be exposed to a potentially explosive or flammable atmosphere.

⚠ WARNING

1. Disconnect power supply before making wiring connections to prevent electrical shock and equipment damage.
2. All appliances must be wired strictly in accordance with wiring diagram furnished with the appliance. Any wiring different from the wiring diagram could result in a hazard to persons and property.
3. All wiring must be done with wiring material having a temperature rating of at least 105°C.

IMPORTANT

The use of this manual is specifically intended for a qualified installation and service agency and is to be used in conjunction with the unit heater installation and service manual. All installation and service of these units must be performed by a qualified installation and service agency. Manuals may contain excerpts from component supplier literature adapted for these products. Any accompanying component supplier literature is for general information.

⚠ CAUTION

Do not reuse any electrical component which has been wet. Such component must be replaced.

Application

For remote control of air delivery volume, solid-state speed controllers are available for steam/hot water unit heaters, models HS/HSB/HC and WTC/WSC, sizes 18 through 108 with 115V/60Hz/1ph, Power Code 01 motors. The controller adjusts motor input voltage to maintain speed regulation at any setting between “High” and “Low”. The control is rated for 5.0 Amps.

Installation and Wiring Connections

1. The speed controller must be field mounted to a standard 2” x 4” junction box.
2. Disconnect power supply before making wiring connections to prevent electrical shock and equipment damage.
3. Installation of wiring must conform with local building codes, or in the absence of local codes, the National Electric Code ANSI/NFPA 70 - Latest Edition. Unit must be electrically grounded in conformance to this code. In Canada, wiring must comply with CSA C22.1, Electrical Code.
4. The unit must be wired strictly in accordance with the wiring diagram furnished with the unit. Any wiring different from the wiring diagram could result in a hazard to persons and property. See Figure 2.1 or 2.2 for the applicable wiring diagram, by unit heater motor size.

Operation Check

1. Once the unit, thermostat, and speed controller have been installed, set the thermostat to the lowest setting and the speed controller to minimum speed.
2. Turn on the power to the system.
3. Adjust the thermostat above room temperature. The motor should start on low speed. If the motor does not start, two possible reasons are:
   a. Check power supply and wiring to ensure the unit is wired properly and the power turned on.
   b. The speed controller has a factory-set minimum set point. If the unit motor does not start at this minimum set point, the minimum set point may be adjusted. See step 4 for instructions.
4. Adjust the speed controller to select the desired fan speed. If a larger speed range is required, the factory-set minimum set point can be adjusted as outlined in the following steps. Note that on new motors, bearings may be slightly tight until motor is “broken-in”. Do not adjust speed controller below minimum speed level until motor has experienced some running time.

THIS MANUAL IS THE PROPERTY OF THE OWNER.
PLEASE BE SURE TO LEAVE IT WITH THE OWNER WHEN YOU LEAVE THE JOB.

a. Remove the speed adjustment knob.

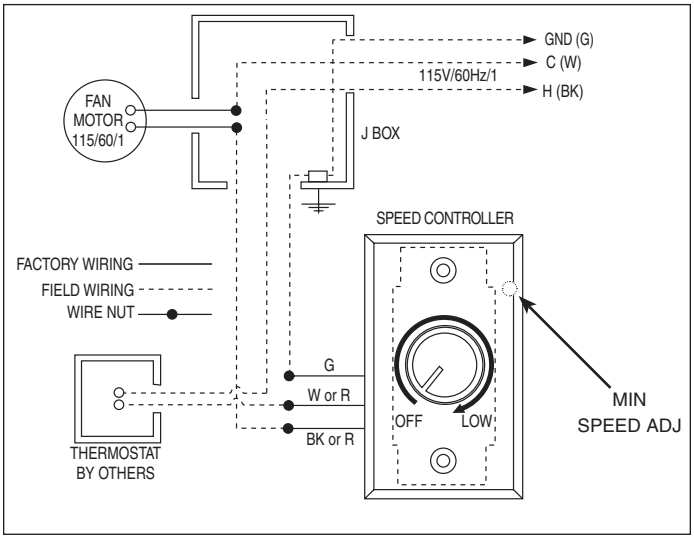
b. Remove the two screws that hold the faceplate to the speed controller to remove the faceplate.

c. On the front upper right-hand corner of the speed controller, there is a screw labeled MIN SPEED ADJ (see Figure 2.1 or 2.2). With a small screwdriver, rotate counter-clockwise to increase minimum speed or clockwise to decrease the minimum speed. Motor will operate from this minimum speed to full speed.

d. Replace the faceplate, screws, and knob

Figure 2.1

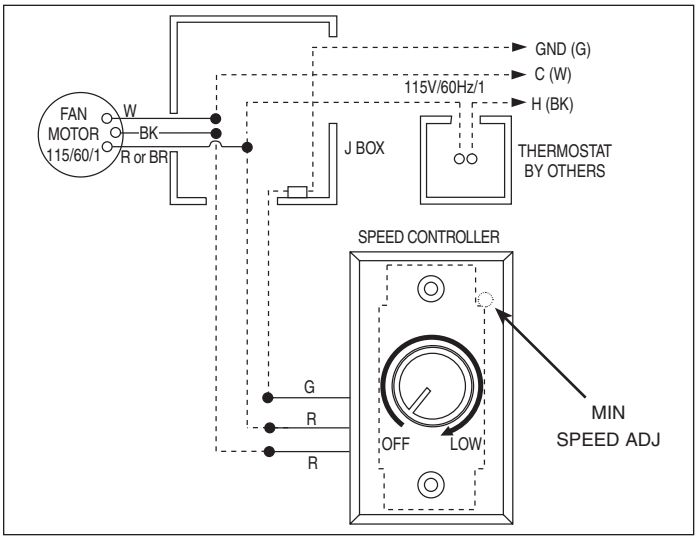
Wiring Diagram - 1/60 HP, 1/25 HP, 1/12 HP Motors



SPEED CONTROL CANNOT BE USED TO TURN UNIT ON/OFF FOR 3-LEAD MOTORS. A THERMOSTAT OR DISCONNECT SWITCH MUST BE USED.

Figure 2.2

Wiring Diagram - 1/8 HP Motors



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