

CLIMATE CONTROL SOLUTIONS

Bard Manufacturing Company  
Bryan, Ohio 43506

# INSTALLATION INSTRUCTIONS

## CMH-14

### OUTDOOR THERMOSTAT KIT

#### DESCRIPTION

The CMH-14 is a field installable outdoor thermostat kit suitable for use as either a compressor cutoff thermostat, or electric heat hold-off thermostat (differences explained below). The 0°- 50°F set point of either type of outdoor thermostat application is variable with geographic region and sizing of the heating equipment to the individual structure. Utilization of the heating Application Data, and the heat loss calculation of the building are useful in determining the correct set points.

**Optional Compressor Cutoff Thermostat** (See Figure 1) – Heat pump compressor operation at outdoor temperatures below 0° are neither desirable nor advantageous in terms of efficiency. An outdoor thermostat can be applied to take the mechanical heating (compressor) off line, and send the (compressor) signal to energize electric heat in its place (to make electric heat first stage heating). This can also be applied to bank the quantity of available electric heat. (Example: Heat pump with 10KW second stage heat, once the outdoor thermostat has switched, 15KW without compressor.)

**Electric Heat Hold-Off** (See Figure 2) – In other applications, it is desirable to disable the operation of the electric heat until outdoor temperatures have reached a certain design point. This won't allow the electric heat to come on as second stage heating unless the outdoor temperature is below the set point of the outdoor thermostat. This is done to maximize efficiency by utilizing the heat pump to bring the conditioned space temperature up rather than cycling on the electric heat due a second stage call for heat from the thermostat on start-up coming off a night set-back condition or someone increasing the thermostat set point. (NOTE: Some programmable thermostats do have a built-in time delay for pulling in second stage heat when coming off set-back conditions.)

The CMH-14 consists of:

1. Outdoor thermostat 910-1122
2. Installation Instructions 7960-246
3. CMH-14 unit label 7961-312-0008

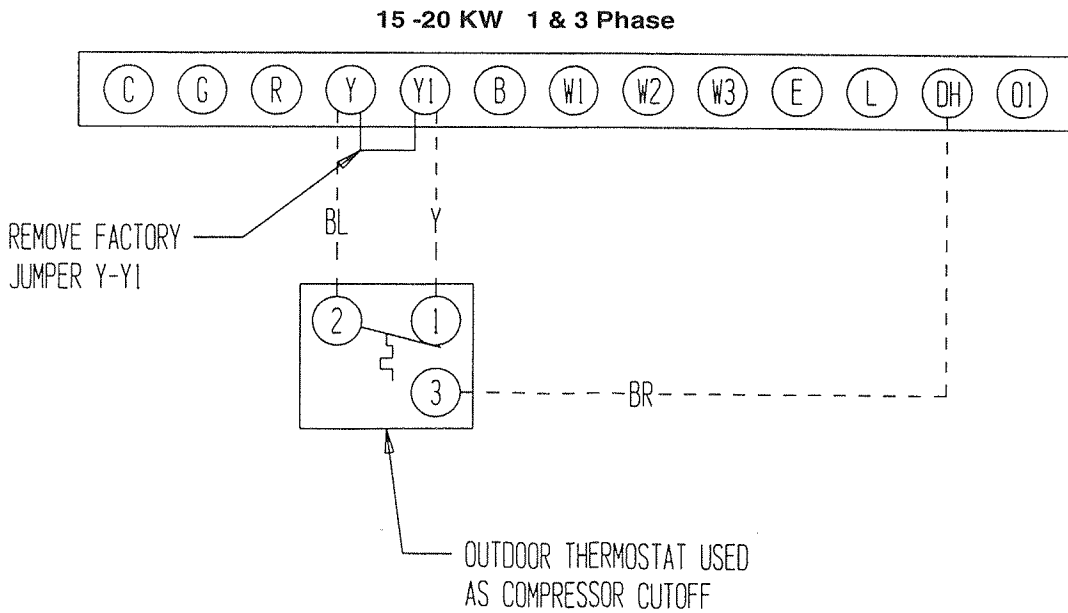
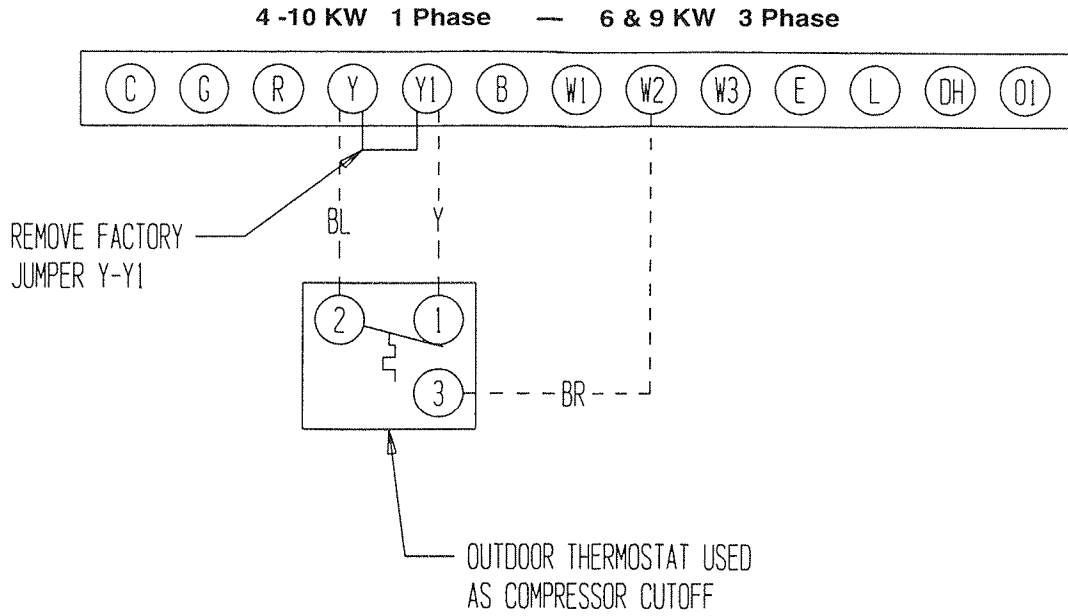
For use with all WH18 – WH60 Hi-Boy Wall Mount Heat Pumps.

#### INSTALLATION INSTRUCTIONS

Disconnect all power to unit. Remove control panel inner and outer covers, and right side condenser inlet grille and front service access panel. Circled numbers on Figure 3 correspond to installation instruction steps.

- Step 1. Mount outdoor thermostat 910-1122 in position shown in Figure 2, Step 1 to side of control panel with screws provided.
- Step 2. Route wires through bushing in side of control panel into the low voltage terminal strip area. See Figure 3, Step 2.
- Step 3. Route thermostat bulb through bushing in condenser partition and mount to the fan shroud with the clamps and screws provided. See Figure 3, Step 3.
- Step 4. Connect wires to the low voltage terminal strip as shown in Figure 1 or Figure 2 depending on your required application.
- Step 5. Recheck wiring. Refer to Figure 1 or Figure 2. Set thermostat to the desired cutout temperature for the compressor, or to hold-off electric heat.
- Step 6. Replace all panels and covers. This completes installation.

**FIGURE 1**  
**COMPRESSOR CUTOFF THERMOSTAT WIRING**



MIS-409

**FIGURE 2**  
**ELECTRIC HEAT HOLD-OFF THERMOSTAT WIRING**

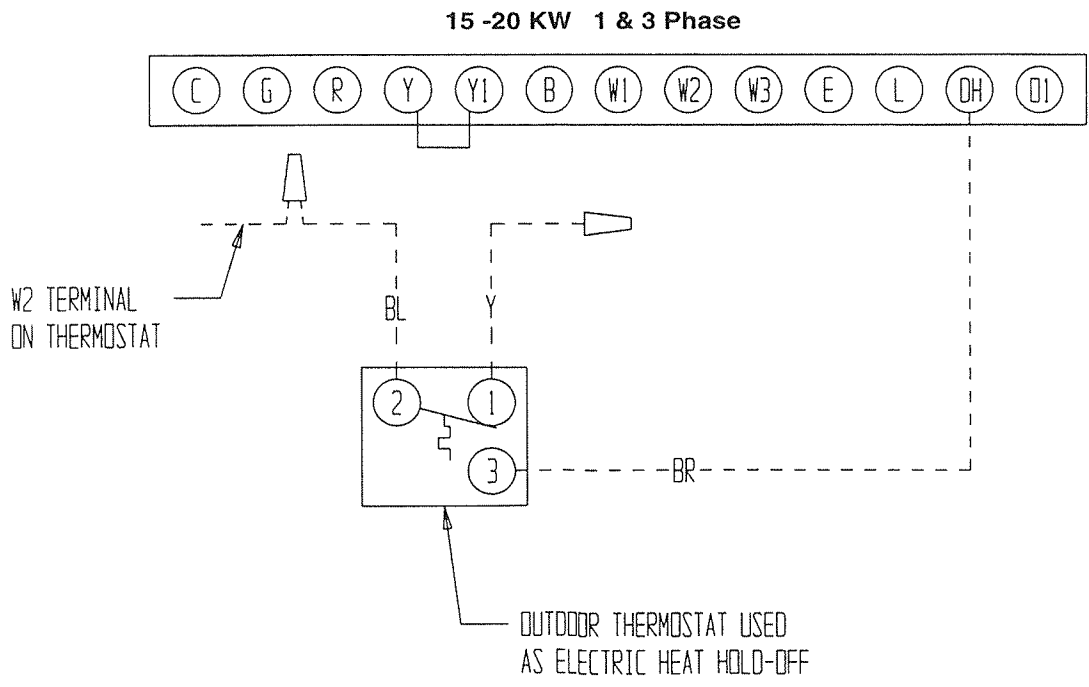
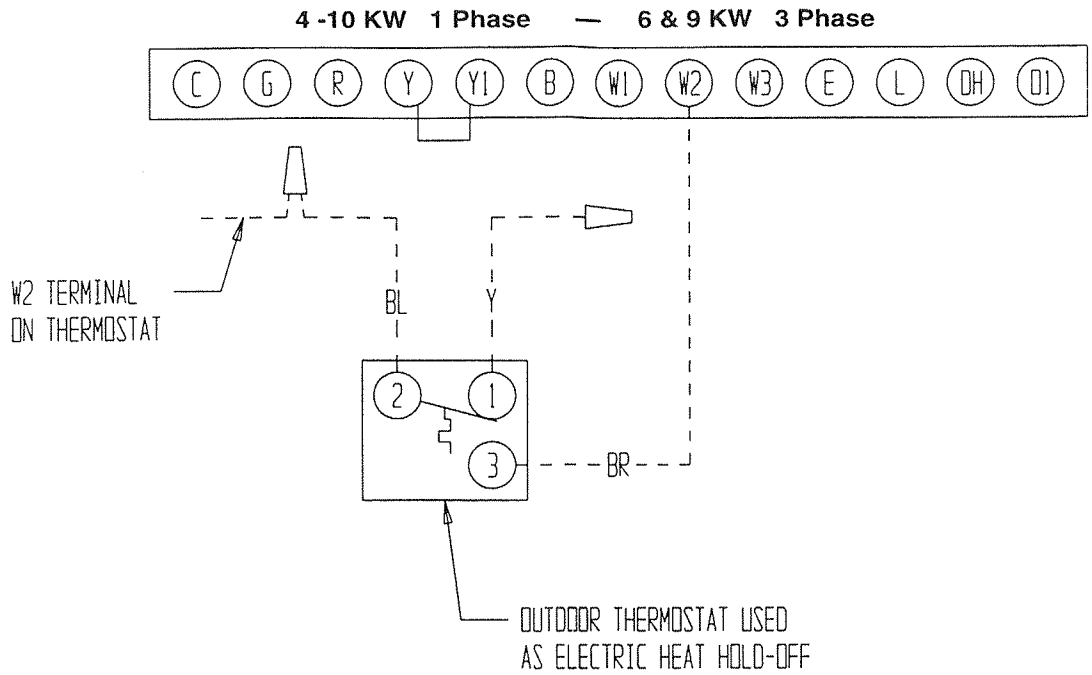
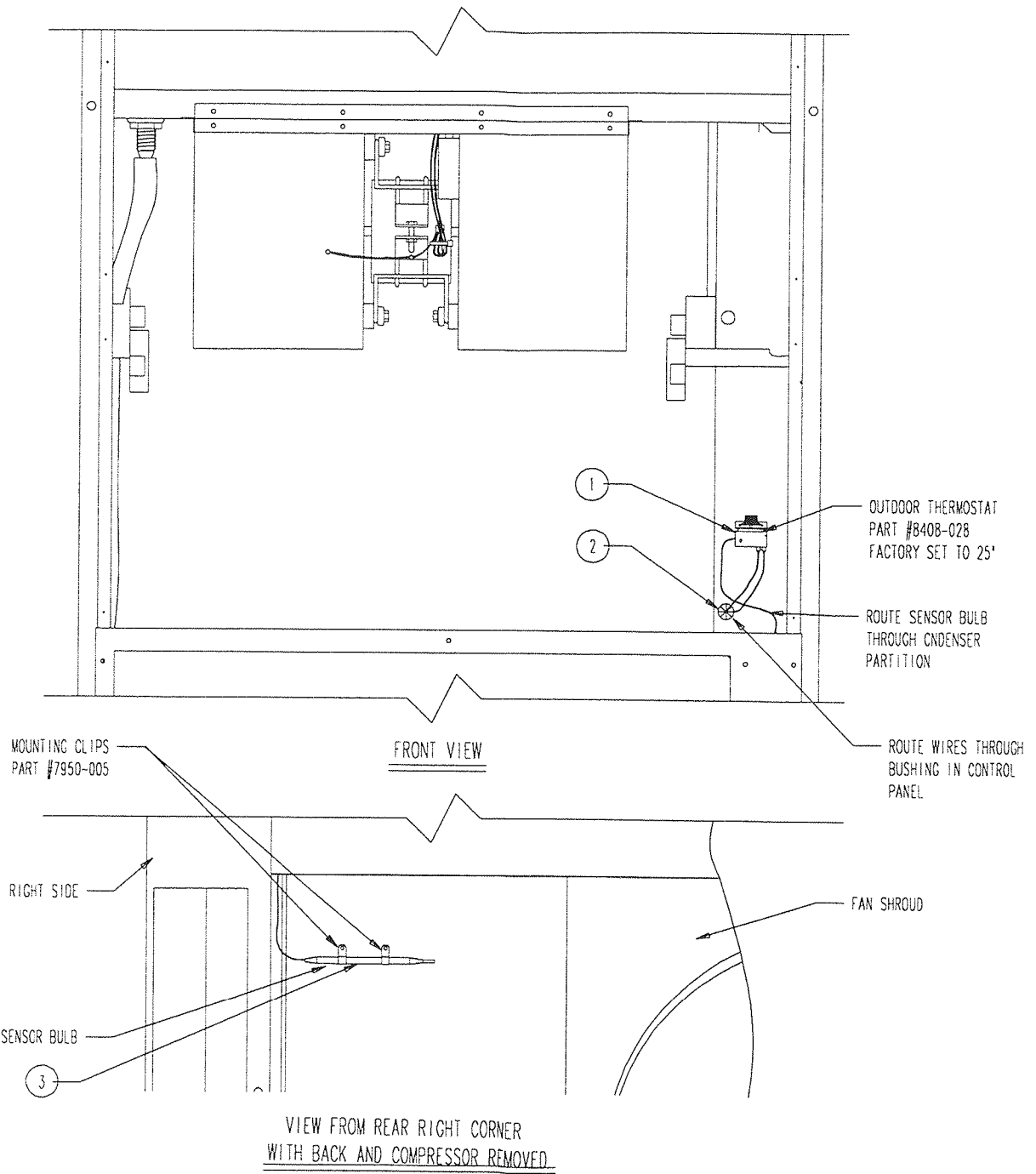


FIGURE 3



MIS-1380