

# ZZ-20 Zone Control System Wiring Details

## GENERAL NOTES:

Install the ZZ-20 control panel on a flat surface near the HVAC equipment. The panel should be installed in a dry, clean location approximately 60 inches from the floor. Do not install the control panel on or inside a rooftop unit.

## 24 VOLT POWER:

The control panel requires a 24 volt, 40 VA transformer. Do not power the control panel from the transformer in the HVAC equipment. Connect 24 volts to the terminals labeled "24 VAC INPUT POWER" on the interface board. 18-2 thermostat wire is recommended.

## DISCHARGE AIR TEMP. SENSOR:

The control panel requires a discharge air temperature sensor. Mount the sensor 36 inches from the HVAC equipment in the supply duct. Connect the sensor to the terminals labeled "DISC TEMP SENSOR" on the interface board. 18-2 thermostat wire is recommended.

## HVAC UNIT:

The control panel is wired to the HVAC equipment in the same way as a standard 2-stage heat/2-stage cool thermostat. Connect the HVAC equipment to the terminals labeled "HVAC UNIT TERMINALS" on the interface board. 18-8 thermostat wire is recommended.

## R, Y, AND W ZONE DAMPER TERMINALS:

The control panel requires a heating and cooling contact closure from each zone damper. Connect terminals R, Y, and W from each zone damper to the terminals labeled R, Y, and W on the interface board. 18-3 thermostat wire is recommended.

## TIME CLOCK, NIGHT STAT, AND OVERRIDE TIMER (OPTIONAL):

The control panel has an optional input for a time clock, night stat, and override timer. To install a time clock, remove the factory installed jumper between the two terminals labeled "TIME CLOCK CONTACTS". Wire the time clock using the contacts that are closed during occupied times. A normally open night stat and override timer can be wired in parallel with the time clock for unoccupied temperature control. 18-2 thermostat wire is recommended.

## PROGRAMMING RESISTOR:

The control panel is equipped with a "2 calls required" resistor factory-installed on the interface board. This resistor determines the number of zones that must be calling for heating or cooling before the system will change modes. Resistors for 1 through 4 "calls required" are also shipped with the control panel. Install the appropriate resistor in the terminals labeled "# CALLS REQUIRED RESISTOR".

## SPEED-UP JUMPER:

The control panel is equipped with "speed up jumper" terminals. Installing a jumper between the two terminals labeled "SPEED UP JUMPER" will reduce the time delays between stages and between modes of operation. The standard time delay between stages and between modes is 15 minutes. With the jumper installed, the time delays are reduced to 3 minutes. The speed-up jumper is for commissioning only. Do not leave the jumper installed after the unit is commissioned.

## MICROPROCESSOR BOARD:

The microprocessor board requires no wiring, adjustment, or maintenance.