RUSKIN®

3900 Dr. Greaves Rd. • Kansas City, MO 64030 • (816) 761-7476 • FAX (816) 765-8955

Z2000RT MODULATING ZONE THERMOSTAT WITH AUTO CHANGEOVER
For use with Ruskin Models ZDS15, ZDR25 and ZDD25 Zone Control Dampers

APPLICATION

Ruskin Model Z2000RT modulating zone thermostat with auto changeover comes standard with the models listed above. Wire the thermostat directly to the zone damper logic board for stand-alone zone applications. When using multiple dampers in a single zone, one thermostat should be wired into the logic board of the primary zone damper. Subsequent tracer dampers may be ordered without the logic board and duct sensor. The tracer dampers will replicate the damper position of the primary damper.

STANDARD CONSTRUCTION

HOUSING
Plastic (off white)

LCD SCREEN
Backlit display indicates temperature and mode

APPLICATION
Heat/Cool

CHANGEOVER
Automatic with programmable setpoint limits

SWITCHING POSITIONS
On - activates, Off - deactivates
C/F button switches display (Celsius/Fahrenheit)

POWER
Hardwired 20 to 30 VAC, 50/60 Hz

DIMENSIONS
3.625" x 3.25" high x .75" deep (92 x 83 x 19)

SETTING TEMPERATURE RANGE
Heat/Cool - Factory preset, 68° F to 76° F (20° C to 24.4° C)

SENSOR ELEMENT
Thermistor

OPERATING HUMIDITY RANGE
5 to 90% RH, non-condensing

FEATURES

- Backlit LCD display
- Automatic changeover
- Programmable setpoint limits

PACKAGE CONTENTS

- Z2000RT Wall mounted thermostat
- Installation instructions

SEQUENCE OF OPERATION

Stand-alone applications:

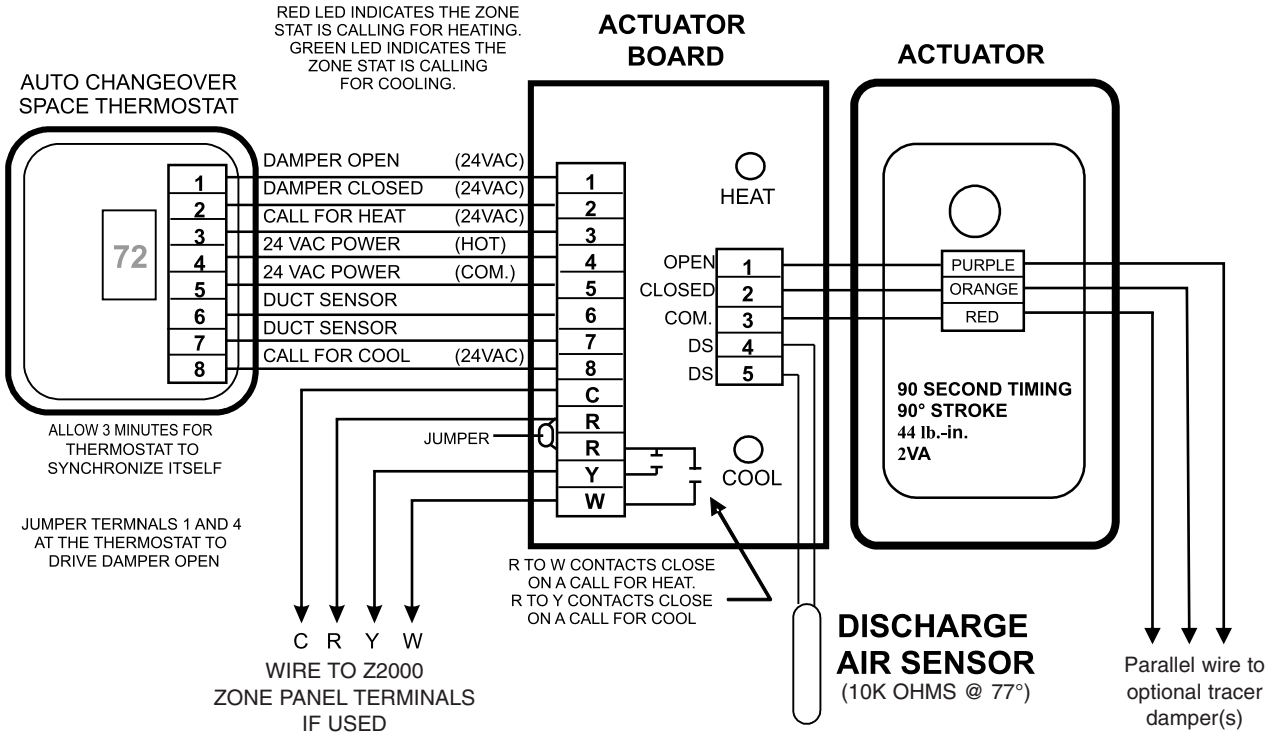
The factory installed automatic changeover duct sensor (standard on models listed above) senses whether there is warm or cool air in the branch supply duct. If the wall mounted Z2000RT is calling for cooling and the duct sensor determines that there is cool air in the duct, the damper will modulate open. If there is warm air in the duct, it will modulate closed. The sequence is reversed in the heating mode. The Z2000RT, in conjunction with any zone damper noted above, provides a turnkey solution to trouble areas in a building. There is no need for additional equipment.

Z2000 Comfort Panel Applications:

When the room temperature is 1.5 degrees F (0.8° C) below setpoint, the thermostat will close the R to W contacts on the actuator board and signal the Z2000 zone comfort panel that there is a heating call. When the room temperature is 1.5 degrees F (0.8° C) above the setpoint, the thermostat will close the R to Y contacts on the actuator board and signal the Z2000 comfort panel that there is a cooling call. Switching from heating to cooling, or cooling to heating, requires a majority vote from all zones. Cooling takes priority when equal zones call for both heating and cooling.

Dimensions in inches, parenthesis ( ) indicate millimeters.

WIRING DIAGRAM



DAMPER NOTES

- To balance the HVAC system, remove each zone thermostat from its sub-base and jumper terminal 1 and 4 to drive the damper to the open position.
- The actuator logic board is factory wired and mounted on the side of the damper or diffuser actuator.
- Each zone damper requires 2 VA.
- The Z2000RT will control up to 12 zone dampers and or diffusers wired in parallel.
- If the discharge air temperature at the damper is warmer than 72°F (22°C), the damper operates as a heating damper. If it is below 72°F (22°C), it will operate as a cooling damper.
- To protect the HVAC equipment and conserve energy, the Z2000RT stat is factory set to a range of 68° to 75°F (20° to 23.8°C). This range should only be changed if absolutely necessary.

Z2000 COMFORT SYSTEM CONTROL PANEL NOTES

- Use standard 18 gage thermostat wire for connections between Z2000 panel and actuator logic board and between Z2000RT room thermostat and actuator logic board.
- Run four-wire cable from the Z2000 panel terminals (R, C, Y, W) to each individual zone damper actuator logic board.
- Panel requires a separate 24 VAC transformer with proper VA rating (see Z2000 literature for detailed information).
- Locate discharge air sensor three feet down stream in trunk line.
- Time Delay Speed Up button should be used for testing only.
- Minimum Call selector switches determine the number of zones that must be calling in order for the system to bring on heating or cooling equipment.
- Time clock contacts are closed during occupied cycle.

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