



NOTES:

1. The Mechanical Systems Control Contractor (MSCC) shall be responsible for the selection of, providing & installing all DDC controllers & control devices to accomplish the sequence of operation specified herein. All products, manufacturers & installation requirements shall conform to Masterspec 230905 - "Mechanical Systems Controls".
2. The MSCC shall provide & install all DDC & related wiring, conduit & j-hook hanging systems. See Masterspec 230905 - "Mechanical Systems Controls" for raceway/conduit, cabling and labeling requirements.
3. MSCC shall integrate unit controls back to the UMH unified front end (i.e. Design) per standards outlined in Masterspec 230905 - "Mechanical Systems Controls".
4. The Systems Integrator (SI) shall be responsible for the integration of all DDC devices and points, point instantiation and the creation of all graphics on the UMH Design front-end. See Masterspec 230924 - "Systems Integration".

SEQUENCE OF OPERATION:

A. Normal Mode:

- A.1. On a call for cooling, the thermostat signals for the heating control valve to modulate toward the closed position. On a further call for cooling, the thermostat signals for the volume damper to modulate from its minimum setting to its maximum setting.
- A.2. On a call for heating, the thermostat signals the volume damper to modulate towards its minimum position. On a further call for heating, the thermostat signals the heating coil valve to modulate toward the full open position.

B. Smoke Control Mode:

- B.1. Upon loss of either supply air or return air duct pressure (i.e. 0.25" or less), as sensed by local pressure switches mounted in respective VAV SA inlet & RA discharge ducts, both the SA & tracking RA VAV boxes shall go to 100% open. Upon increase in both SA and RA duct pressure (0.25" or greater), VAV boxes shall resume normal operation per above.
- C. To support pressure switch maintenance issues, the MSCC shall program an override point which shall allow the BMS to monitor the active pressure switch input status, but can allow a system operator to override the VAV box control into either "Normal Mode" or "Smoke Control Mode".

Note to Editor: Delete the following paragraph and associated occupancy sensor in above diagram if occupancy sensors are not used:

- D. When VAV box senses that the space is unoccupied, minimum airflow reduces to 0 CFM and the VAV box modulates to maintain temperature range of 70°F - 74°F.

TYPICAL DDC VAV UNIT W/ REHEAT CONTROL & TRACKING RETURN DIAGRAM - RETROFIT IN EXISTING UH FACILITY

