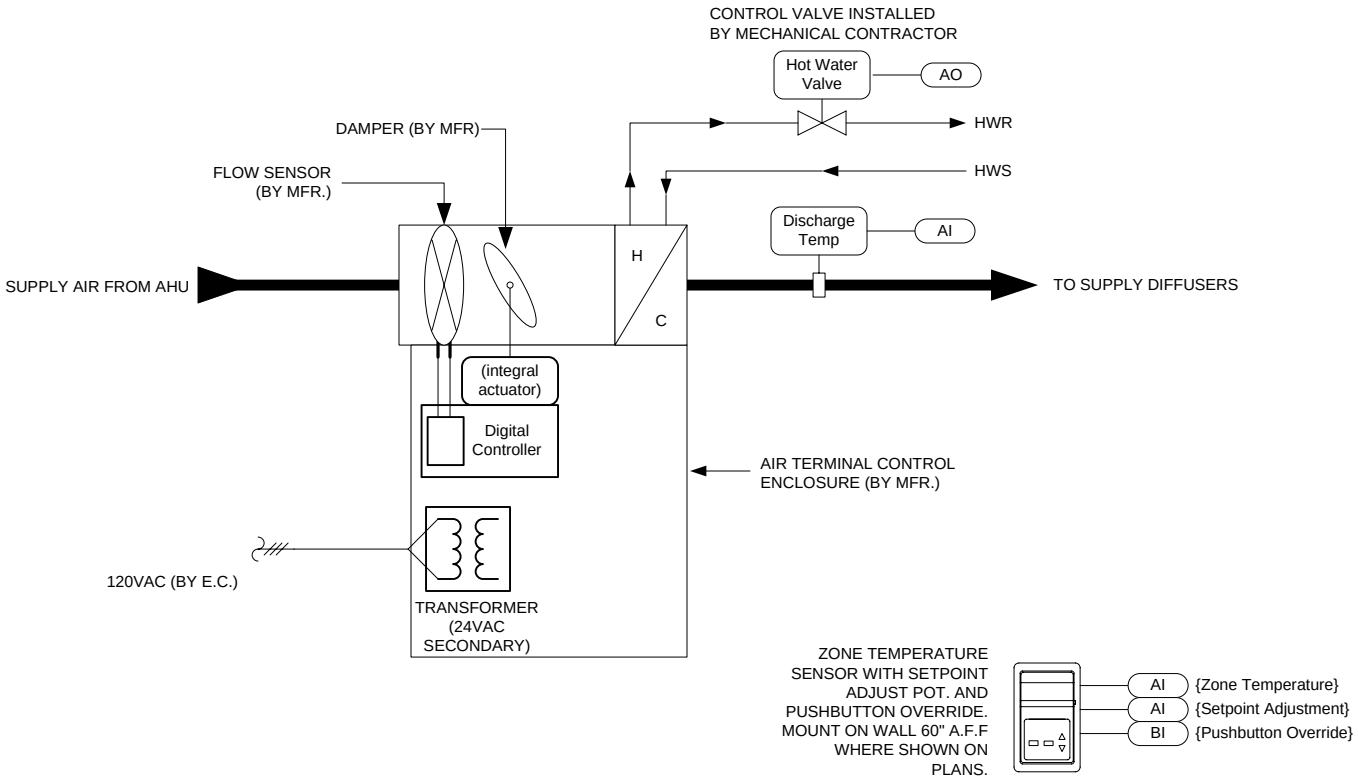
TYPICAL SINGLE DUCT VAV BOX CONTROL DETAIL

N.T.S.



CONTROL POINTS

MARK	TYPE	DESCRIPTION
ZN-T	AI-01	Zone Temperature
SP-ADJ	AI-02	Pushbutton Override
DA-T	AI-03	Discharge Air Temp
SA-CFM	AI-04	Supply Airflow (CFM)
PBO	BI-01	Pushbutton Override
DMPR-O	BO-1	Air Damper Open
DMPR-C	BO-2	Air Damper Closed
HW-VLV	AO-01	Hot Water Control Valve
CLG-SP	AD-1	Cooling Setpoint
HTG-SP	AD-2	Heating Setpoint
AF-SP-MIN	AD-3	Airflow Setpoint Min.
AF-SP-MAX	AD-4	Airflow Setpoint Max.

SEQUENCE OF OPERATION

Primary airflow is maintained within minimum and maximum limits based upon the reading of an airflow sensor to give pressure independent control of the variable air volume terminal unit. The direct digital controller determines the control mode (heating, cooling, or deadband) by comparing the zone temperature to the Active Heating Temperature Setpoint and Active Cooling Temperature Setpoint. The cooling and heating requirements are determined using a P+I control logic algorithm.

In the Cooling Mode, the primary airflow modulates between the active cooling minimum and maximum airflow setpoints as the cooling requirement goes from 0 to 100%. In the Deadband Mode, the primary airflow is at the active cooling minimum airflow setpoint. In the Heating Mode, the primary airflow is at the active heating minimum airflow setpoint and the hot water reheat coil control valve is modulated (0-10vdc) to maintain the active heating temperature setpoint.

The roof-top unit shall be shut-down during the unoccupied mode. Zone temperatures shall be sampled through-out the unoccupied period. If any of these room fall below of the night setback temperature setpoint (60°F, adj.) or above the night setup temperature setpoint (85°F, adj.), the roof-top unit will be duty-cycled (as described in the RTU sequence of operation) until the night setback or setup temperature setpoint is satisfied. The VAV air damper shall be driven full open during the unoccupied mode.

During the morning warmup mode, the terminal units shall modulate to their maximum CFM position.