

Economizer Equipped Air Handling System Point List

Point Name	AI	AO	DI	DO	Virtual	Network	Sensor Type	Comment
Supply fan start-stop				X			Relay	
Supply fan proof-of-operation			X				Current switch	Note 4
Supply fan run hours					X		N/A	Note 4
Outdoor air temperature	X						Moneyhell Standard	Note 4
Minimum outdoor air damper command		X					Moneyhell Standard	Note 4
Minimum outdoor air flow	X						Differential Pressure	Notes 1, 4
Minimum outdoor air flow set point					X		N/A	Note 4
Maximum outdoor air damper command		X					Moneyhell Standard	Note 2, 4
Return air damper command		X					Moneyhell Standard	Note 2, 4
Relief air damper command		X					Moneyhell Standard	Note 2, 4
Building pressure in the area served		X					Differential Pressure	Note 4
Return air temperature	X						Moneyhell Standard	Note 4
Mixed air temperature	X						Moneyhell Standard	Note 4
Prefilter pressure drop		X					Moneyhell Standard	Note 4
Final filter pressure drop		X					Moneyhell Standard	Note 4
Hot water valve command		X					Moneyhell Standard	
Hot water coil leaving air temperature		X					Moneyhell Standard	Note 4
Fan leaving air temperature		X					Moneyhell Standard	Note 4
Chilled water valve command			X				Moneyhell Standard	
Ball room temperature		X					Platinum RTD with xmttr	Typical of 2, Notes 3, 4
Reheat valve command			X				Moneyhell Standard	Typical of 2, Notes 3, 4
Note 1 - Furnish an Air Monitor-Volu-prob traverse station or equal. Coordinate with Division 15 for installation. Furnish and install a differential pressure-based transmitter matched to the characteristics of the traverse station to ensure accuracy and turn down.								
Note 2 - Use one output to control the outdoor air, return air and relief air dampers.								
Note 3 - Furnish and install a pneumatic two pipe thermostat for zone temperature control and a compatible pneumatic valve for the associated reheat coil.								
Note 4 - Modified or Deleted, VE Study								

ECONOMIZER EQUIPPED AIR HANDLING SYSTEM SEQUENCE OF OPERATION

1.

The air handling system shall run on a daily schedule as required to support functions in the area served. The operating staff shall have the capabiltiy to set daily schedules for up to one month in advance of the current date. The schedule shall allow for up to 10 starts and stops for each day of the week.
2.

The air handling system shall maintain a constant supply temperature as scheduled on the equipment schedule for the system under all occupied operating conditions. The operating team shall have the ability to over-ride this set point as needed.
3.

The control system shall sequence all of the heat transfer elements in the systems to maximize the efficiency of the system under all operating conditions. Heating elements shall be driven to fully open when the system is off line as a freeze protection measure. Cooling coils shall be driven to fully closed when the system is off. Economizer dampers shall be driven to the full return air position when the system is off.
4.

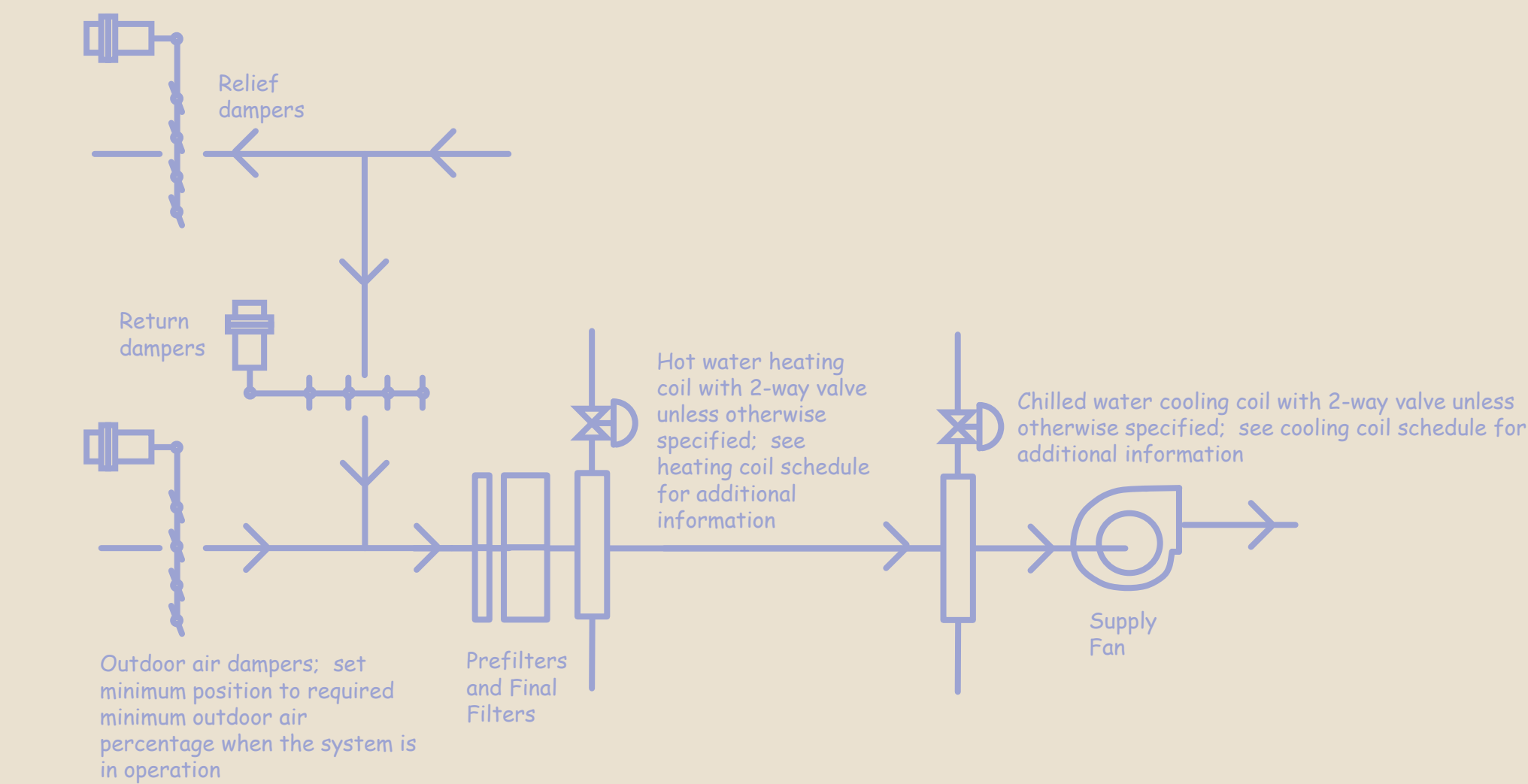
Safety interlocks shall be provided as required by the manufacturer. At a minimum, for the economizer equipped air handling systems, the interlocks shall include a freeze-stat and a supply and return air smoke detector and fire alarm shut down.
5.

All motor starters shall be provided with motor overloads and meet the requirements of the National Electric Code and shall be provided with Hand-Off-Auto switches. Automated control of the motor by the control system shall occur with the switch in the "Auto" position. The "Hand" position shall allow the operator to over-ride the control system. Regardless of the position of the selector switch, all safety devices shall function.
6.

All safety interlocks shall be hard wired. Software based safeties shall not be accepted.
7.

Provide trending and trend archiving capabilities only. Trends to be set up as required by the operating team subsequent to construction.
8.

Provide high alarm high warning alarm, low warning alarm and low alarm capabilities only. Alarms to be set up as required by the operating team subsequent to construction.



TYPICAL ECONOMIZER EQUIPPED AHU SCHEMATIC

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Point Lists,
Sequences