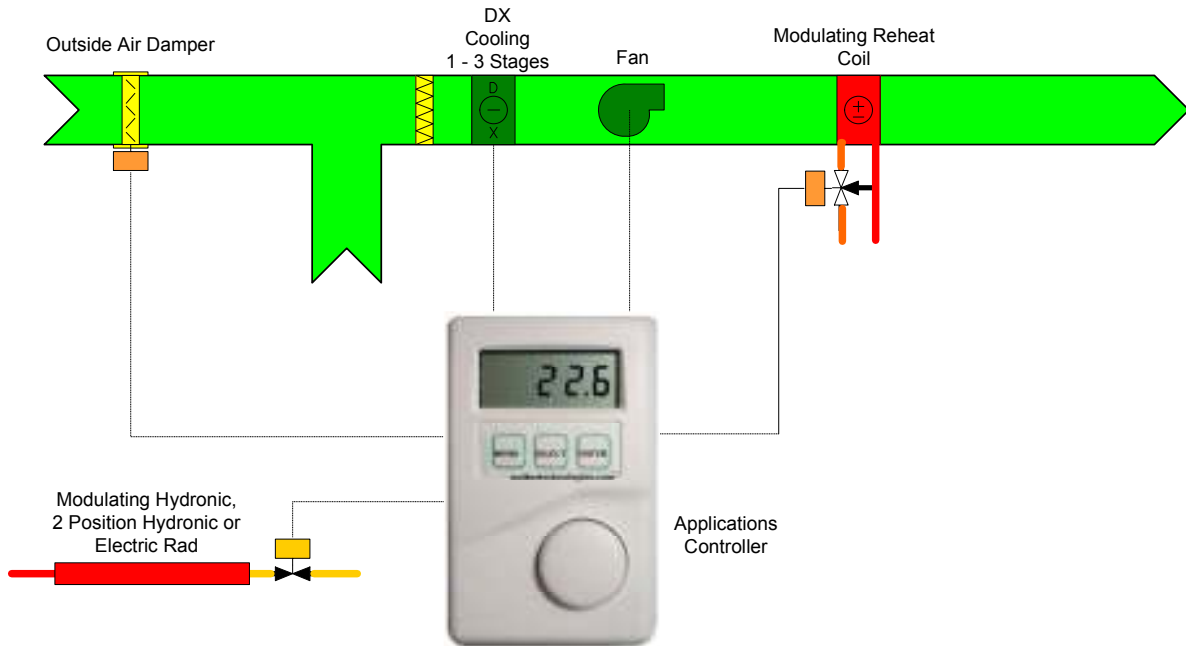


Programmable Stat - DX Fan Coil with Hydronic Heating Coil



Description

Programmable thermostat capable of Proportional + Integral control of direct expansion fan coil with hydronic heating coil. Unlike ordinary programmable stats, the Empire stat can coordinate the operation of the fan coil unit with modulating reheat and/or radiation, provides anti recycle protection for compressors, and can be incorporated into a future Building Automation System. Can be configured for operation in Celcius or Fahrenheit.

Guide Specification

Products

2.x Programmable Thermostat Kit - Direct Expansion Fan Coil with Hydronic Heating Coil

Programmable Thermostat for direct expansion fan coil and reheat and/or radiation, Model BNR-FCU complete with space and supply air temperature sensors, control relay kit, control valve assemblies, transformer and control fuse, optional Real Time Clock, 7 day TOD scheduling and liquid crystal display as manufactured by Empire Controls Limited of Woodbridge, Ph 905-264-7282, Fax 905-850-8564, empire@empirecontrols.com. Stats without analogue output points, P + I control, and antirecycle protection are not acceptable. Non communicating stats are not acceptable.

Execution - Sequence of Operations

3.4.x Programmable Thermostat - Direct Expansion Fan Coil with Hydronic Heating Coil

During Occupied or "Day" Mode, the Empire stat commands the fan to run continuously, commands the fresh air damper open and cycles the stages of direct expansion cooling (with interstage time delay and minimum time off) as required to maintain the Day Cooling Setpoint, and modulates the reheat coil valve and/or radiation valve as required to maintain the space above the Day Heating Setpoint. The Setpoint is the Day Heating Setpoint. The Day Cooling Setpoint is the Day Heating Setpoint plus "Zero Energy" Deadband.

An occupant can adjust the setpoint by turning the knob. When the knob is turned, the LCD shows the setpoint. The occupant simply moves the dial until the desired setpoint is shown, and then leaves the stat alone. After a few seconds, the LCD reverts to alternatively displaying temperature and time of day. (7 day time clock operation.)

During Unoccupied (Nite) Mode, the fresh air damper remains closed, and the fan runs intermittently when there is a call for either heating or cooling. The cooling cycles as required to maintain the space temperature at the Night Cooling Setpoint. The heating coil modulates as required to maintain the space temperature at the Night Heating Setpoint.

During Unoccupied Mode, an occupant can put the system into Day Mode for a override period of 2 hours by pressing the "ENTER" key.

Mount thermostat, and connect to fan coil unit, solenoid valves (if any) and SAT sensor. Wire any necessary interlocks between fan coil and condensing unit. Check operation of sensors, valve(s) and compressors and password.

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