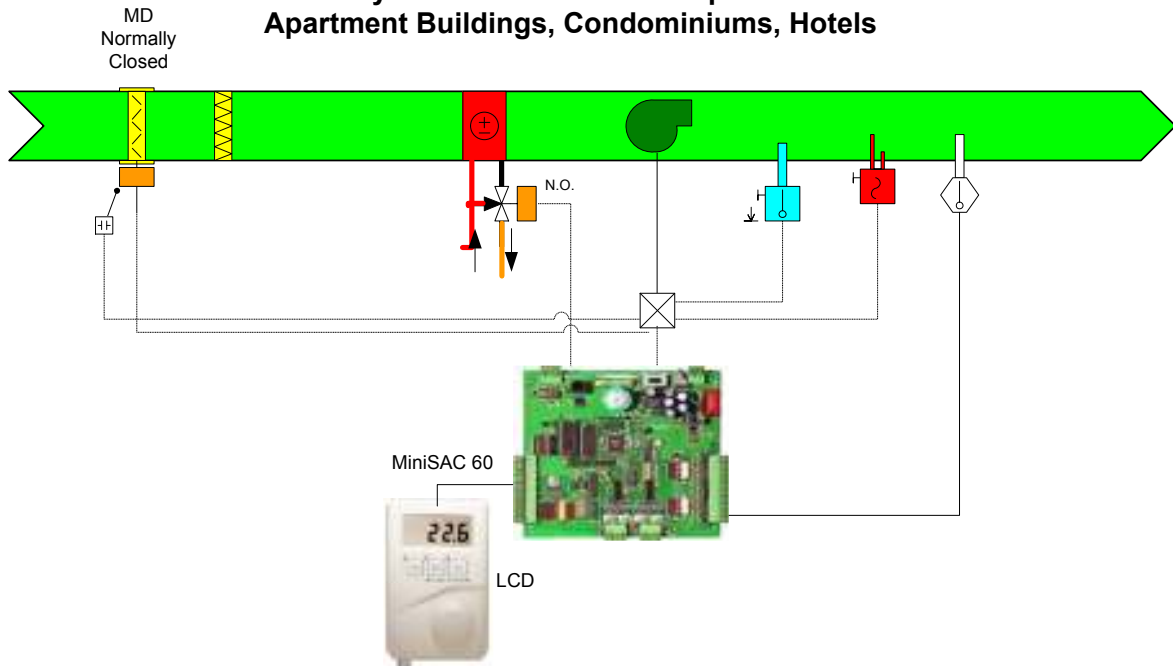


Hydronic Fresh Air Makeup Unit Apartment Buildings, Condominiums, Hotels



Description

Electronic controller provides affordable, but very stable and energy efficient control of 100% outside air makeup air unit with hydronic heating coil. Controller can be integrated into an Empire Controls DDC system, either at time of installation or at a later date. Can be configured for operation in Celcius or Fahrenheit. Controller is complete with LCD, setpoint adjustment knob, time of day scheduling/Real Time Clock & 7 day Time of Day scheduling.

Guide Specification

Products

2.x Fresh Air Makeup Air Unit Controller Kit

Makeup Air Unit Controller, Model BNR-MUA complete with remote mounted Supply Air Temperature sensor, setpoint adjustment knob, fully modulating spring return control valve assemblies, manual reset freezestat, control relay, transformer and liquid crystal display as manufactured by Empire Controls Limited of Woodbridge, Ph 905-264-7282, Fax 905-850-8564, empire@empirecontrols.com. Stats incapable of controlling modulating valve or network communications are not acceptable.

Execution - Sequence of Operations

3.4.x Fresh Air Makeup Air Unit

Controller puts makeup air unit into operation during Occupied Mode. Motorized damper then opens. When damper is fully opened, as proven by end switch, the fan starter is activated.

When fan starter is activated as determined by auxiliary contacts on the starters, the glycol heating coil modulates as required to maintain Supply Air Temperature at setpoint. Proportional plus integral control of valve is provided by Empire controller.

Supply Air Temperature (in degrees Celcius) is continuously displayed in the Liquid Crystal Display on the controller.

SAT is operator adjustable within the reasonable range of 12 - 22 degrees Celcius, by means of adjusting the dial potentiometer on the Empire MUA Controller. (LCD displays Setpoint when dial is moved. After a short period, the LCD reverts to displaying SAT.)

If Supply Air Temperature is below 4 degrees Celcius (39 degrees Fahrenheit), the electromagnetic freezestat interrupts power to the fan starter coil and the outside air damper and the heating valve, causing the unit to revert to safe position until the freezestat is manually reset. "Safe position" is for the MUA is defined as fan off, damper closed, valve fully open to flow.

Similarly, in the event of activation of the smoke detector or fire alarm system, the unit operation is suspended until the alarm condition is cleared. (Fire alarm interlock and smoke detector are by Division 16).

Damper and heating valve remain in safe position whenever unit operation is suspended for any reason. i.e. damper closed and valve open to flow through coil.

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