Unit Vent Open

integrated unit ventilator controller

Carrier's Unit Vent Open Controller is an integrated component of a Carrier unit ventilator. The Unit Vent Open controller continuously monitors and regulates unit ventilator operation with reliability and precision. This advanced controller features a sophisticated, factory-engineered control algorithm that provides optimum performance and energy efficiency. The Unit Vent Open controller also features plug-and-play connectivity to the Carrier i-Vu Open Control System. The Carrier i-Vu Open Control System combines state-of-the-art Carrier equipment, plug-and-play controllers, and the powerful, web-based i-Vu user interface to form a cohesive, intuitive, and fully-integrated BACnet® Building Automation System.

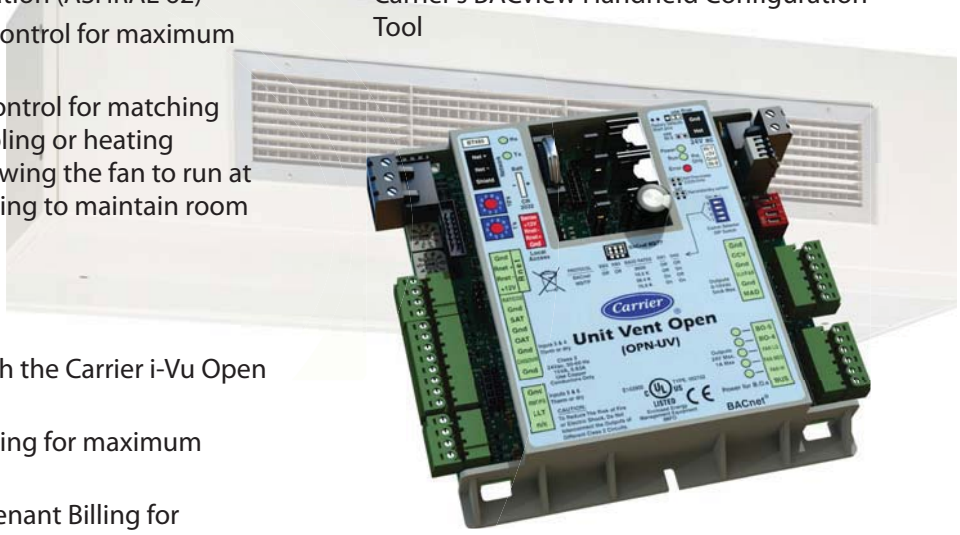
For added flexibility, the Unit Vent Open controller is capable of stand-alone operation, or it can be integrated with any Building Automation System utilizing the BACnet protocol.

Application Features

- Controls modulating hot water/steam valves or up to 3 stages of electric heat to maintain space temperature setpoint
- Controls modulating chilled water valves or a single stage of DX cooling to maintain space temperature setpoint
- Supports 2-pipe changeover or 4-pipe system combinations
- Controls up to 3 fan speeds
- Built-in advanced control routines for zone level demand control ventilation (ASHRAE 62)
- Optimal start and PID control for maximum occupant comfort
- Automatic fan speed control for matching fan speed to actual cooling or heating requirements, thus allowing the fan to run at the lowest capable setting to maintain room setpoint

Hardware Features

- Compatible with 40UV (vertical) and 40UH (horizontal) unit ventilators
- Integrates easily into any BAS using the BACnet MS/TP protocol
- On-board hardware clock, remote occupancy input, and support for SPT/thermistor sensors provide stand-alone operation
- Thermostat linkage allows up to 8 unit ventilators to operate from 1 sensor
- Easy startup and commissioning using Carrier's BACview Handheld Configuration Tool



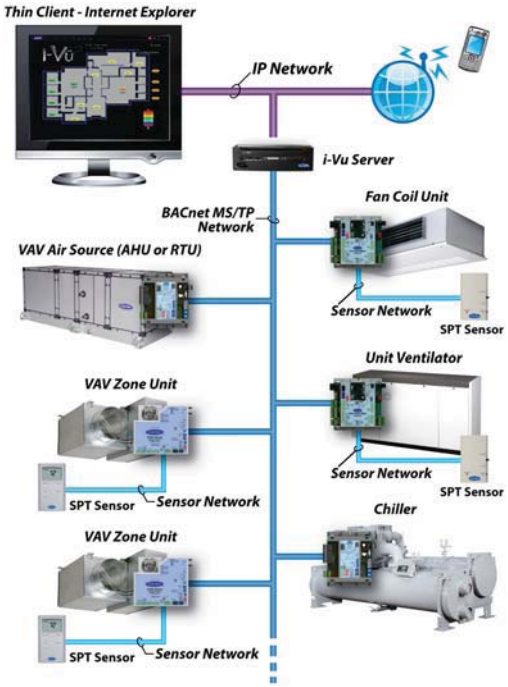
System Benefits

- Fully plug-and-play with the Carrier i-Vu Open Control System
- Supports demand limiting for maximum energy savings
- Compatible with i-Vu Tenant Billing for tracking tenants' after-hours energy usage

Specifications

BACnet Support	Advanced Application Controller (B-AAC), as defined in BACnet 135-2001 Annex L
Communication Ports	**Network port:** EIA-485 port for BACnet MS/TP communications (baud rate is DIP switch selectable); **Comm Option port:** For connecting a LON Option Card (future); **Local Access port:** For system start-up and troubleshooting using a PC or BACview (115.2 kbps); **Rnet port:** For connecting SPT room sensors. The Rnet port supports up to 4 SPT Standard sensors and 1 SPT Plus or SPT Pro sensor for averaging or high/low select control.
Inputs	**2 binary inputs:** Remote Occupancy Contact/Fan Status, and Low Limit Thermostat. **4 analog inputs:** RAT (10k thermistor), SAT (10k thermistor), OAT (10k thermistor), and Changeover Switch (dry contact)/Changeover Sensor (10k thermistor). AI's have 10 bit A/D resolution.
Outputs	**5 binary outputs:** High Speed Fan, Medium Speed Fan (or Stage 3 Electric Heat), Low Speed Fan (or Stage 2 Electric Heat), 2-Pipe Valve/Heating Valve/Electric Heat Stage 1, and Cooling Valve/Electric Heat Stage 1 with 2-Pipe Electric Heat. Relay contacts rated at 1 A max. @ 24 VAC/VDC, configured normally open. **3 analog outputs:** Mixed Air Damper, Two-Pipe/Heating Valve/F&B Damper, and Cooling Valve. AO's rated at 0-10VDC, 5mA max, with 8 bit D/A resolution using filtered PWM.
Protection	Incoming power and network connections are protected by non-replaceable internal solid-state polyswitches that reset themselves when the condition that causes a fault returns to normal. The power, network, input, and output connections are also protected against voltage transient and surge events.
Real Time Clock	Battery-backed real time clock keeps track of time in event of power failure
Battery	10-year Lithium CR2032 battery provides a minimum of 10,000 hours of trend data & time retention during power outages
Status Indicators	LED status indicators for communications, run status, error, power, and all digital outputs
Controller Addressing	Rotary DIP switches set BACnet MS/TP MAC address of controller
Listed by	UL-916 (PAZX), cUL-916 (PAZX7), FCC Part 15-Subpart B-Class A, CE EN50082-1997
Operating Temperature	0 to 130°F (-18 to 54°C), 10–90% relative humidity, non-condensing
Storage Temperature	-24 to 140°F (-30 to 60°C), 10–90% relative humidity, non-condensing
Power Requirements	24VAC ± 10%, 50-60Hz 18 VA power consumption (24 VA with BACview) 26VDC (25V min, 30V max) Single Class 2 source only, 100 VA or less

Carrier i-Vu Open Control System



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