VVT Zone Controller

Part Number: OPN-VVTZC

Carrier®
Turn to the Experts.℠

The VVT Zone Controller provides zone level temperature and air quality control for a variety of pressure-dependent VVT applications. This advanced controller features an integral actuator for easy installation onto single duct and parallel fan-powered air terminals. It also features native BACnet communications and 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.

Application Features

- Sophisticated factory-engineered and tested algorithms provide reliability and energy efficiency

- Pressure dependent space temperature control

- Supports 2-position hot water, modulating hot water, 2-stage electric heat, or combination baseboard and electric ducted heat

- Built-in advanced control routines for zone level humidity control or zone level demand control ventilation (ASHRAE 62)

- Adaptive optimal start and PID control for maximum occupant comfort

- Supports Carrier SPT room sensors, which allow for local setpoint adjustment and local overrides
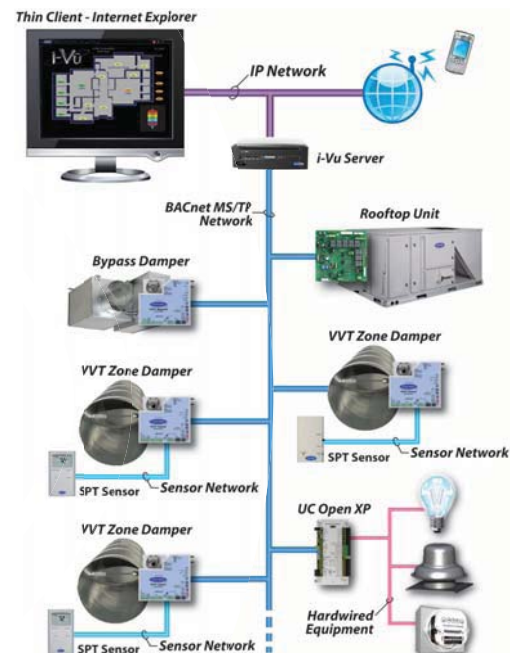
System Benefits

- Integrated Carrier airside linkage algorithm for plug-and-play integration with Carrier air sources

- 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

Hardware Features

- Integral, brushless actuator for reliability and longevity

- Capable of system or stand-alone operation

- Native BACnet MS/TP communications
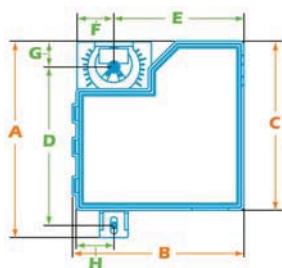
The Carrier i-Vu Open Control System

Specifications

Part Number: OPN-VVTZC

BACnet Support	Conforms to the Advanced Application Controller (B-AAC) Standard Device Profile as defined in BACnet 135-2001 Annex L
Communication Ports	BACnet port: EIA-485 port for BACnet MS/TP communications (9600 bps, 19.2 kbps, 38.4 kbps, & 76.8 kbps); 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 four SPT Standard sensors and one SPT Plus or SPT Pro sensor for averaging or high/low select control.
Integral Actuator	Brushless DC motor, torque 35 inch-pounds (4Nm), runtime 205 seconds for 90 degree travel during control
Inputs	Three analog inputs: RH/CO2 (0-5V), T55 (10k thermistor), SAT (10k thermistor). All analog inputs have 10 bit A/D resolution. One binary input: Remote Occupancy (dry contact).
Outputs	One analog output: Hot Water Valve (HWV). Analog output is 0 to 10VDC (5mA maximum) with 8 bit D/A resolution. Three binary outputs: HEAT1, HEAT2, and FAN. Relay contact rated at 1A max @ 24VAC/VDC, configured normally open.
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.
Battery	10-year Lithium CR2032 battery provides a minimum of 10,000 hours of trend data retention during power outages
Status Indicators	LED status indicators for BACnet MS/TP communication, 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, UL94-5VA plenum rated enclosure
Environmental Operating Range	0°F to 130°F (-17.8°C to 54.4°C); 10 to 90% RH, non-condensing. *For indoor use only
Power Requirements	24VAC ± 10%, 50 to 60Hz, 14 VA 26VDC (25V min, 30V max)

Dimensions

Overall
A: 7" (17.8cm)
B: 6-1/32" (15.3 cm)
C: 6" (15.25 cm)
Depth: 2-1/2" (6.4 cm)
min. panel depth
Weight: 1.7 lbs (0.77 kg)

Mounting*
D: 5-5/8‴ (14.2 cm)
E: 4-9/16" (117.0 cm)
F: 1-5/16" (3.30 cm)
G: 7/8" (2.40 cm)
H: 1-5/16" (3.40 cm)

Minimum Shaft Diameter: 3/8" (.95 cm)
Maximum Shaft Diameter: 1/2" (1.27 cm)
Minimum Shaft Length: 1-3/4" (4.45 cm)

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