i-Vu® Building Automation System
VVT Bypass

Part Number: OPN-VVTBP

The i-Vu® Building Automation System provides everything you need to access, manage, and control your building, including the powerful i-Vu user interface, plug-and-play BACnet® controllers, and state-of-the-art Carrier equipment.

The VVT Bypass controller is used to regulate the supply duct static pressure for a variety of pressure-dependent VVT applications and allows constant volume HVAC equipment to provide zone level temperature control. This advanced controller features an integral, brushless actuator and an integral pressure sensor for reliability and longevity. It also features native BACnet communications and plug-and-play connectivity to the Carrier i-Vu Building Automation System.

Application Features

- Sophisticated factory-engineered and tested control programs provide reliability and energy efficiency
- Temperature protection minimizes the occurrence of air source heating and/or cooling lockouts based on unacceptable discharge temperatures
- VFD support via 0-10VDC analog output to provide drive speed modulation
- Can drive multiple damper actuators
- Provides automatic pressure sensor calibration

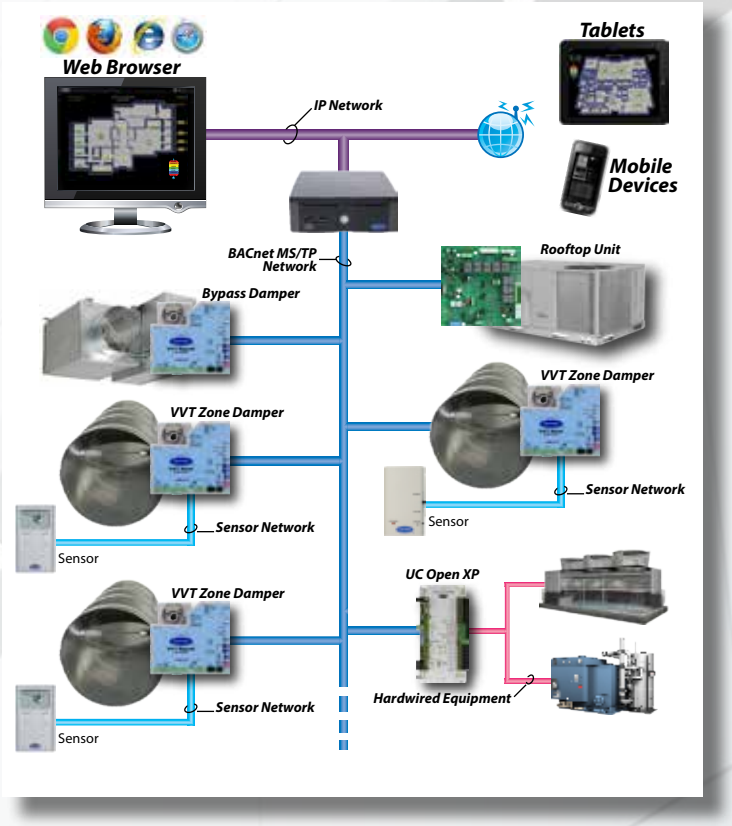
System Benefits

- Integrated Carrier airside linkage algorithm for plug-and-play integration with the Carrier VVT System
- Fully plug-and-play with the Carrier i-Vu Building Automation System

Hardware Features

- Integral, brushless actuator and integral pressure sensor
- Designed for vertical or horizontal mounting
- Capable of system or stand-alone operation
- Native BACnet MS/TP communications

The Carrier i-Vu Building Automation System



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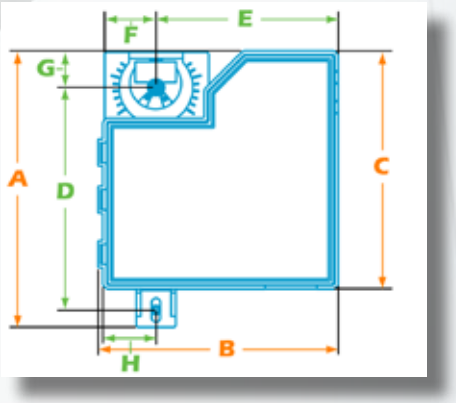
BACnet Support	Advanced Application Controller (B-AAC), as defined in BACnet 135-2001 Annex L
Communication Ports	**BACnet port:** EIA-485 port for BACnet MS/TP communications (9600 bps, 19.2 kbps, 38.4 kbps, & 76.8 kbps); **Local Access port:** For system start-up and troubleshooting (115.2 kbps); **Rnet port:** Not used
Integral Actuator	Brushless DC motor, torque 35 inch-pounds (4Nm), runtime 205 seconds for 90 degree travel during control
Integral Pressure Sensor	Precision low flow AWM series 0–2 in. H_2O, sensitive down to ±0.001 in. H_2O. Barbed tapered airflow connections accept 3/16 in. (4.75 mm) I.D. tubing. Allows for readings across the 0–2 in. H_2O range, accurate to ±5% of full flow at 2 in. H_2O
Inputs	**1 analog input:** DAT (10k thermistor). AI has 10 bit A/D resolution.
Outputs	**1 analog output:** VFD/Actuator. AO is 0 to 10VDC (5mA maximum) with 8 bit D/A resolution using filtered PWM.
Protection	Incoming power and network connections are protected by non-replaceable internal solidstate 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	**Operating:** 0 to 130°F (-18 to 54°C) 10 to 90% RH, non-condensing **Storage:** -24 to 140°F (-30 to 60°C) 10 to 90% RH, non-condensing
Power Requirements	24VAC ± 10%, 50-60Hz, 14 VA power consumption 26VDC (25V min, 30V max), Single Class 2 source only, 100 VA or less

Dimensions

Overall
A: 7” (17.8cm)
B: 6-1/32” (15.3 cm)
C: 6” (15.25 cm)

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)

Depth: 2-1/2” (6.4 cm)
Weight: 1.7 lbs (0.77 kg)
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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