



i-Vu® Building Automation System

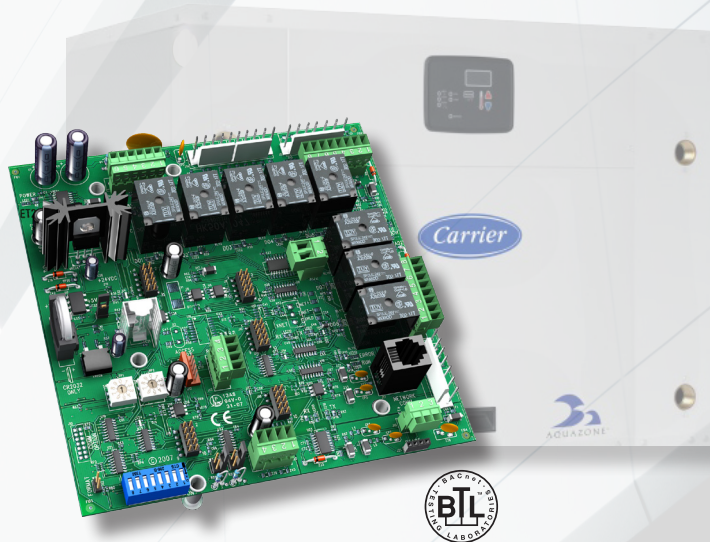
WSHP Water-To-Water Open

Integrated Water Source Heat Pump Control



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.

Carrier's Water-to-Water (W2W) Open controller is an integrated component of a Carrier water-to-water source heat pump. The W2W Open controller continuously monitors and regulates heat pump operation with reliability and precision. This advanced controller features a sophisticated, factory-engineered control program that provides optimum performance and energy efficiency. For added flexibility, the W2W Open controller is capable of stand-alone operation. It can also be integrated with any Building Automation System using the BACnet, Modbus®, LonWorks®, or N2 protocol.



Application Features

- Controls up to 4 stages of capacity (up to 3 compressor stages), to maintain the desired entering or leaving water temperature
- Provides 5 operating modes for manual or automatic system changeover operation
- Provides load water pump output control
- Provides source water pump or 2-position isolation valve control
- May be configured to reset the water temperature proportionally based upon OAT during cooling or heating modes
- In cooling mode, the control has the capability to limit the OAT reset based upon the difference between a measured humidity value and a configured high RH setpoint limit
- For larger installations, a total of up to 8 stages may be controlled as a singular heating or cooling source. One controller will operate as the master, coordinating others in the system.

System Benefits

- Integrated Carrier Condenser Water Linkage algorithm for plug-and-play coordination with the source water system when controlled by a Carrier water loop controller
- Fully plug-and-play with the Carrier i-Vu Building Automation System
- Supports demand limiting for maximum energy savings

Hardware Features

- Compatible with Carrier's Aquazone™ water-to-water water source heat pumps with Puron® refrigerant (R-410A)
- Integrates easily into any BAS using BACnet, Modbus, LonWorks®, or N2 protocols
- On-board hardware clock, remote occupancy input, and support for communicating/thermistor sensors provide stand-alone operation
- Easy startup and commissioning using i-Vu User Interfaces

*Requires LON Option Card (p/n LON-OC)



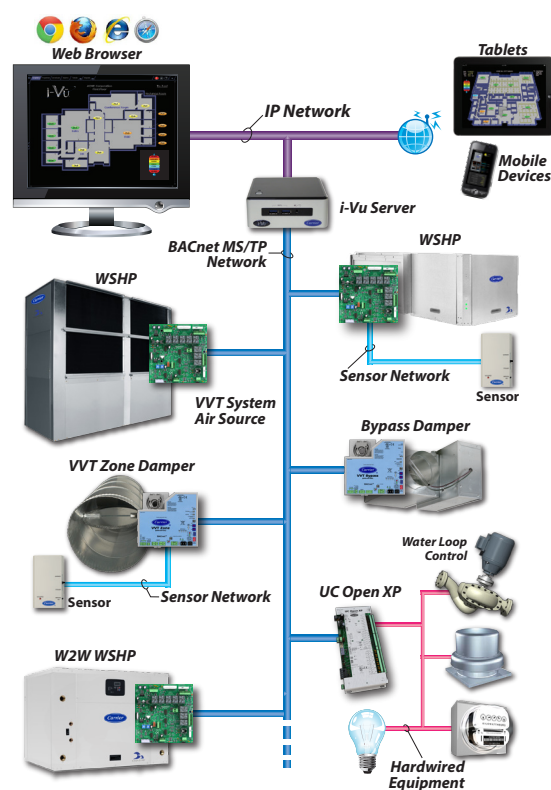
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BACnet Support	Advanced Application Controller (B-AAC), as defined in BACnet 135-2001 Annex L
Communication Ports	Network Comm port: EIA-485 port for BACnet MS/TP or ARCNET 156 kbps, Modbus RTU, or N2 communications (protocol and baud rate are DIP switch selectable) Comm Option port: For connecting a LON Option Card (p/n LON-OC) Local Access port: For system start-up and troubleshooting (115.2 kbps) Rnet port: For connecting a T1 temperature sensor
Inputs	5 analog inputs: Leaving Load Water Temperature, Entering Load Water Temperature (optional), Leaving Source Water Temperature, Outdoor Air Temperature (optional), and Relative Humidity (optional). All AI's have 10 bit A/D resolution. 5 binary inputs: Compressor 1 Status, Compressor 2 Status, Compressor 3 Status, Remote Occupancy Contact, and Safety Shutdown
Outputs	8 binary outputs: Stage 1 through Stage 4 Capacity Control, Reversing Valve, Source Water Pump/ Isolation Valve, Load Water Pump, and Alarm Lamp. Relay contacts rated at 3A max @ 24VAC, configured normally open
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
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.
Status Indicators	LED status indicators for network communications, run status, error, power, and all digital outputs
Controller Addressing	Rotary dip switches set BACnet MS/TP or ARCNET, Modbus, or N2 address of controller
Listed by	UL-873, FCC Part 15-Subpart B-Class A, CE EN50082-1997
Environmental Operating Range	Operating: -40 to 158°F (-40 to 70°C) 10 to 95% RH, non-condensing Storage: -40 to 158°F (-40 to 70°C) 10 to 95% RH, non-condensing
Power Requirements	24VAC \pm 10%, 50 to 60Hz, 20 VA power consumption, Single Class 2 source only, 100 VA or less

The Carrier i-Vu Building Automation System



CONTROLS EXPERT

Tested. Certified. Factory Authorized.

**For more information, contact
your local Carrier Controls Expert.**
 Controls Expert Locator:
www.carrier.com/controls-experts

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