# i-Vu® Building Automation System
# Carrier® ChillerVu™ - PSM-IO

Part Number: OPN-PSM-MPCXPE

*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® ChillerVu™ is a sophisticated, scalable, native BACnet® control solution for chiller plant control and operation. The Carrier ChillerVu works in conjunction with a library of factory-engineered control programs that are specifically designed to cover the most common chiller plant configurations.

## System Benefits

- Compatible with Carrier's 19, 23, and 30-series chillers (air or water-cooled)
- Easy startup and commissioning using the i-Vu Pro user interface
- Fully plug-and-play with the Carrier i-Vu Building Automation System. As an integrated component of the i-Vu BAS, the controller can respond to the needs of the building, automatically starting or stopping the plant, resetting the chilled water supply temperature, and matching the tonnage produced to the tonnage required by the building.
- Supports integration to chiller plant equipment using Carrier CCN®, BACnet, Modbus®, and LonWorks®[1] protocols
- Embedded trends and alarms provide insight on chiller plant performance and also aid in system troubleshooting and maintenance

## Hardware Features

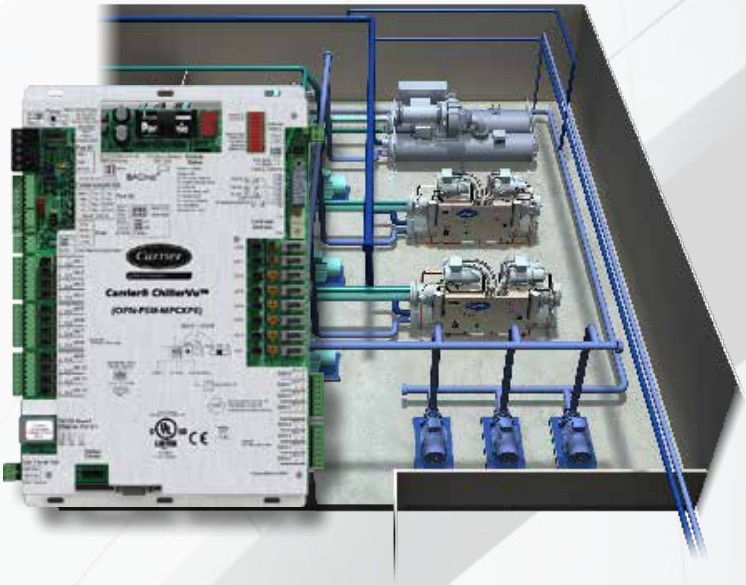
- Native BACnet MS/TP communications
- Battery-backed real time-clock keeps time in the event of power failure
- Universal inputs and outputs, with HOA override switches on outputs
- Supports 20 I/O points directly, and up to (6) MPC Open XPIO expanders can be added for additional point capacity (164 I/O points total)
- First MPC Open XPIO expander can be mounted directly on controller to save panel space

## Software Features

- Supports library-driven programming using EquipmentBuilder
- Supports custom programming using LogicBuilder or Snap

[1]Requires Serial LonTalk Adapter (SLTA-10), available from Echelon Corporation.

These factory-engineered control programs are designed to provide optimized control over all aspects of a chiller plant, coordinating the control of chillers, pumps and towers into a finely tuned, cohesive system. Whether you have 2 or 20 chillers, the i-Vu chiller plant controller is able to control Carrier 19, 23, or 30 series chillers (air or water-cooled). It also has full integration capabilities, allowing it to monitor and control other equipment in the chiller plant as well, including non-Carrier chillers.



## Sampling of Supported Chiller Plant Configurations

- Parallel chiller piping
- Constant volume or variable primary flow pumping
- Primary/secondary pump systems
- Dedicated or headered pumps
- Self-contained single tower systems (open or closed)
- Self-contained single chiller systems (chillers, towers, pumps)

## Sampling of Supported Control Features

- Chiller, tower, and pump manager programs
- Constant volume and VFD pumps
- User adjustable staging and sequencing (temperature, load, or KW)
- Add/drop load feathering
- Machine run order (by manual rotation or by run hours)
- Chiller water setpoint adjustment (reset by outside air temperature or number of cooling callers)

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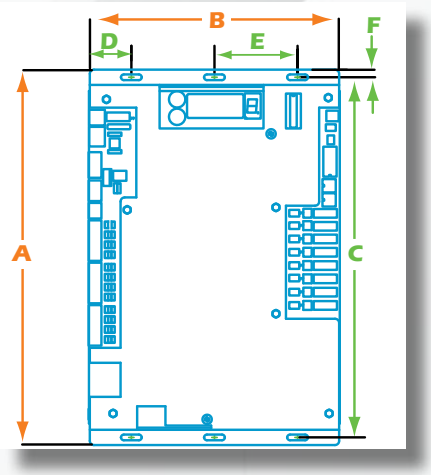
| | |
|---|---|
| **BACnet Support`** | Advanced Application Controller (B-BC), as defined in BACnet 135-2012 Annex L, Protocol Rev. 9 |
| **Communication Ports** | **Ethernet Port (E1):** 10/100 BaseT Ethernet port for LAN/BACnet IP/Modbus TCP/IP communications<br>**BACnet Port (S1):** BACnet MS/TP port - 9600 bps, 19.2 kbps, 38.4 kbps, or 76.8 kbps<br>**Integration Port (S2)**: DIP-switch selectable port for CCN, Modbus, or LonWorks communications<br>**Local Access port:** For system start-up and troubleshooting (115.2 kbps)<br>**Rnet port:** For connecting Carrier communicating room sensors and Carrier's touchscreen interface<br>**Xnet Remote Expansion port:** For communication with up to 6 MPC Open XPIO48 and/or MPC Open XPIO816 expanders (500 kbps). Connection options: Mount 1 on top of Carrier ChillerVu controller, mount in a stack, or mount remotely up to 100 ft.away from Carrier ChillerVu controller. |
| **Inputs** | 12 universal inputs, configurable for 0-5 VDC, 0-10 VDC, 0-20 mA, thermistor (10k Type II), 1k RTD (Platinum, Nickel, or Balco), and Dry Contact. All have 14 bit A/D and support up to 40 pulses per second (12.5 msec min. pulse). |
| **Outputs** | 8 universal outputs, jumper configurable for 0-10 VDC, 0-20 mA (12 bit A/D), or 24 VDC (50 mA relay drive). HOA (hand/off/auto) switches for all outputs, including potentiometer for manual adjustment of analog outputs. |
| **Protection** | **Incoming power:** replaceable 3 Amp Pico® fuse<br>**Network:** non-replaceable internal solid-state polyswitches that reset themselves when fault clears<br>The power, network, and I/O are also protected against voltage transient and surge events. |
| **Battery** | 10-year Lithium CR123A battery provides a maximum of 720 hours of time retention during power outages. |
| **Status Indicators** | LED status for communications and low battery. 7-segment status display for running, error, and power. |
| **Listed by** | UL-916 (PAZX), cUL-916 (PAZX7), FCC Part 15-Subpart B-Class A |
| **Addressing** | Rotary dip switches set BACnet MS/TP address |
| **Real Time Clock** | Battery-backed real time clock |
| **Environmental Operating Range** | **-Operating:** 0 to 140°F (-18 to 60°C), 0 to 90% RH, non-condensing<br>**-Storage:** -24 to 140°F (-30 to 60°C), 0 to 90% RH, non-condensing |
| **Power Requirements** | 24VAC ± 10%, 50-60Hz<br>50 VA power consumption<br>26VDC (25V min, 30V max), 23W<br>Single Class 2 source only, 100 VA or less |
| **Dimensions** | **Overall**<br>**A:** 11-5/16" (28.7 cm)<br>**B:** 7-1/2" (19 cm)<br>**Mounting**<br>**C:** 10-7/8" (27.6 cm)<br>**D:** 1-1/4" (3.2 cm)<br>**E:** 2-1/2" (6.4 cm)<br>**F:** 1/4" (.6 cm)<br>**Depth:** 1-7/16" (3.7 cm)<br>**Weight:** 1.7 lbs (0.8 kg) |

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