



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

Part Number: OPN-PSM-MPCXPE



The Carrier® ChillerVu™ plant control system coordinates the control of all aspects of a chiller plant, providing optimized occupant comfort while helping to reduce energy usage and operating costs.



The system includes a dedicated chiller plant controller and an extensive library of control programs, graphics, and energy dashboards that can be easily customized to meet the design and specifications of any chiller plant.

## System Benefits

- Compatible with Carrier's 19, 23, and 30-series chillers (air or water-cooled), as well as non-Carrier chillers
- Integrates seamlessly with chiller plant equipment using Carrier CCN®, BACnet, Modbus®, and LonWorks®<sup>1</sup> protocols
- Fully plug-and-play with the Carrier i-Vu building automation system
- Easy start-up and commissioning using i-Vu Pro and pre-engineered control programs and graphics
- Pre-configured energy dashboards and embedded trends/alarms provide immediate insight on chiller plant performance and aid in troubleshooting/maintenance

## Energy Saving Strategies

- Enhanced chiller staging dynamically matches the number of running chillers to building load
- Variable flow pump sequences minimize pump energy consumption
- Staged and variable speed tower fans minimize tower fan energy consumption
- Demand limiting limits plant energy consumption to fixed levels, avoiding excess electrical demand charges
- Sophisticated system scheduling reduces unnecessary plant run time

## Sampling of Standardized Control Features

- Enhanced staging via chiller, tower, and pump manager programs
- Application-specific staging of Carrier 23XRV chillers (series counterflow)
- Variable primary flow chilled water pumping
- Variable flow condenser pumping
- Staged and variable speed tower fans

## Easily Customizable for Any Plant

- Reconfigure control sequences easily using EquipmentBuilder or fully edit them in Snap
- Pre-configured, user editable energy dashboards — actionable plant energy data graphically displayed
- High quality, automatically generated plant room graphics, requiring minimal user input
- Basic, representative piping layout showing relational equipment locations
- Equipment complement selectable from within EquipmentBuilder
- Up to eight chillers, towers, condenser and chilled water pumps in any combination
- Live status data, plus animation indicating equipment running state

<sup>1</sup>Requires Serial LON Talk Adapter (SLTA-10) available from Echelon Corporation.

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### Specifications

<b>BACnet Support</b>	Advanced Application Controller (B-BC), as defined in BACnet 135-2012 Annex L, Protocol Rev. 9
<b>Communication Ports</b>	<b>Ethernet Port (E1):</b> 10/100 BaseT Ethernet port for LAN/BACnet IP/Modbus TCP/IP communications <b>BACnet Port (S1):</b> BACnet MS/TP port - 9600 bps, 19.2 kbps, 38.4 kbps, or 76.8 kbps <b>Integration Port (S2):</b> DIP-switch selectable port for CCN, Modbus, or LonWorks communications <b>Local Access port:</b> For system start-up and troubleshooting (115.2 kbps) <b>Rnet port:</b> For connecting Carrier communicating room sensors and Carrier's touchscreen interface <b>Xnet Remote Expansion port:</b> 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.
<b>Inputs</b>	<b>12 universal inputs:</b> Configurable for 0-5 VDC, 0-10 VDC, 0-20 mA, thermistor (5k, 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).
<b>Outputs</b>	<b>8 universal outputs:</b> 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.
<b>Protection</b>	<b>Incoming power:</b> replaceable 3 Amp Pico® fuse <b>Network:</b> non-replaceable internal solid-state polyswitches that reset themselves when fault clears The power, network, and I/O are also protected against voltage transient and surge events.
<b>Battery</b>	10-year Lithium CR123A battery provides a maximum of 720 hours of time retention during power outages.
<b>Status Indicators</b>	LED status for communications and low battery. 7-segment status display for running, error, and power.
<b>Listed By</b>	UL-916 (PAZX), cUL-916 (PAZX7), FCC Part 15-Subpart B-Class A
<b>Addressing</b>	Rotary dip switches set BACnet MS/TP address
<b>Real-Time Clock</b>	Battery-backed real time clock
<b>Environmental Operating Range</b>	<b>Operating:</b> 0 to 140°F (-18 to 60°C), 0 to 90% RH, non-condensing <b>Storage:</b> -24 to 140°F (-30 to 60°C), 0 to 90% RH, non-condensing
<b>Power Requirements</b>	24VAC ± 10%, 50-60Hz 50 VA power consumption 26VDC (25V min, 30V max), 23W Single Class 2 source only, 100 VA or less

### Dimensions

#### Overall

**A:** 11-5/16 in. (28.7 cm)

**B:** 7-1/2 in. (19 cm)

#### Mounting

**C:** 10-7/8 in. (27.6 cm)

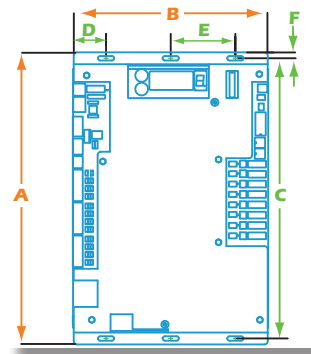
**D:** 1-1/4 in. (3.2 cm)

**E:** 2-1/2 in. (6.4 cm)

**F:** 1/4 in. (.6 cm)

**Depth:** 1-7/16 in. (3.7 cm)

**Weight:** 1.7 lbs (0.8 kg)



For more information, contact your local Carrier Controls Expert.

Controls Expert Locator:  
[www.carrier.com/controls-experts](http://www.carrier.com/controls-experts)