

# ComfortPoint Open CP-VAV(UNITARY CONTROLLER)

## DATA SHEET

### Trademark Information

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## GENERAL

- Native BACnet series of controllers
- Complies to BACnet 135-2007 protocol revision
- CP-VAV firmware 2.5 is based on B-AAC BACnet profile
- Outstanding performance with 32 bit technology
- Uses standard VAV application or flexible custom programming
- Built-in Real Time Clock
- Connects to one of three BACnet MSTP channels of a ComfortPoint Open plant controller
- Fully integrated with ComfortPoint Open Manager (CPO-M) and Enterprise Buildings Integrator (EBI)
- Flexible and easy configuration with ComfortPoint Open Studio and quick VAV Balancing with ComfortPoint Open online tool

### Attention



Note: Due to Product renovation & technology upgrade, the specifications given in this data sheet may subject to change. Please contact your regional product management for current updates.

## FEATURES

### Freely Programmable Native BACnet Controller

CP-VAV is a freely programmable native BACnet controller.

### Onboard Input and Outputs

CP-VAV comes with base 21 input and outputs with an integrated air flow sensor.

### VAV Applications

ComfortPoint Open Studio tool comes with predefined VAV Applications which can be downloaded to CP-VAV. The Tool allows spare points programming as per user needs.

### Programming and Balancing

CP-VAV can be programmed using ComfortPoint Open Studio. Balancing is done via ComfortPoint Open Online which allows online discovery of VAV devices on the BACnet MSTP channel.

### Easy installation

The ComfortPoint Open plant controllers have a built in BACnet router which eliminates the need for additional BACnet routers for the system. ComfortPoint Open Manager and EBI can access all MSTP Unitary controllers via CPO-PC-6A BACnet router.

### Peer to Peer communication

CP-VAV can communicate and share points with CP-VAV and CP-SPC over MSTP network.

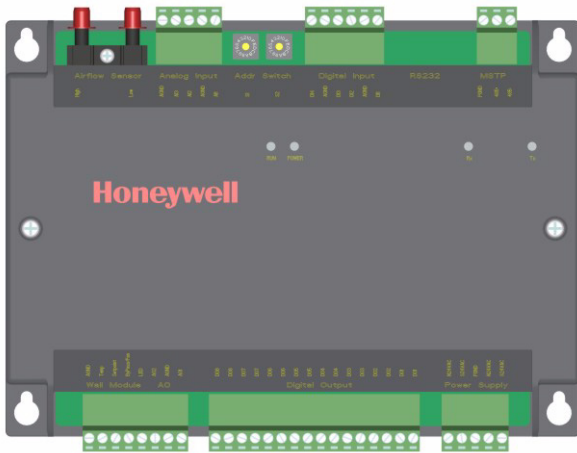
### Flexible mounting options

DIN-rail or wall mounting.

### Automatic MAC addressing

Automatically assigns own unique MAC address.

# CP-VAV FRONT VIEW



## SPECIFICATIONS

### Electrical Data

#### Operating Voltage

- 24 VAC ± 20%

#### Power Consumption

- 7 VA

#### Housing Material

- ABS Plastic

#### Mounting

- DIN rail
- Wall mounting

#### Protection Class

- IP20

#### CPU

- Processor: ColdFire<sup>®</sup>; 5225x, 64 MHz, 32-Bit High Performance processor

#### Memory

- 1 MB Flash
- 64 KB RAM
- Battery Backup: Data backup upto 72 hours

#### Real Time Clock

- Built-in Real Time Clock

#### Velocity Pressure Sensor

- Operating Range: 0 to 1.5 in. H<sub>2</sub>O (0 to 374 Pa) and accuracy is ±2% of full scale.

### Integrated I/Os

#### Digital Output

- 8 DOs (Triac output)
- Maximum voltage: 24 VAC
- Maximum continuous current: 500 mA
- Minimum current: 30 mA

#### Digital Input

- 4 potential-free contact Digital inputs
- 2 out of 4 DIs can be used as Pulse Input @ 15 Hz for Energy Meter Totalization Applications

#### Analog Output

- 3 AOs, 0 -10 Vdc
- Resolution: 12-bit

#### Analog Input

- AI 1, AI 2, AI 3, AI 4 and AI 6 are universal, and can be used as 0-10Vdc, NTC 20K, PT1000 and Potential Free contact Digital Inputs.
- AI 5 can not be used as PT1000, but can be used as 0-10Vdc, NTC 20K and Potential Free contact Digital Inputs.
- AI 4, AI 5 and AI 6 also can be used as wall module inputs.
- 12-bit A/D resolution

#### Attention



Airflow sensor is available for only CP-VAV.

#### Types of input signals

- NTC 20 k ohms (-50 to +150 deg.C)
- PT1000 (-50 to +150 deg.C)
- 0 to +10 V
- 0(4) to 20 mA (with an external resistor of 499 ohms + or - 0.25%)
- Potential Free Contact (Digital Input)
- Wall Module Connection (Only to predefined terminals)

#### Attention



Resolution of the PT1000 sensor: 1 Fahrenheit or 0.6 Centigrade.

## Environmental

### Temperature

- Operation: 0 ~ 50°C;
- Storage: -20 ~ +70 °C

### Ambient Humidity (operation and storage)

- 5 to 93% relative humidity, non-condensing

### Certifications

- CE
- BTL revision 7
- UL 916
- FCC Part15, Subpart B, Class B
- ICES-003 issue 4

## Hardware Interfaces

### MSTP Port 1

- Supports 9.6, 19.2, 38.4 and 76.8 Kbps
- Connects to MSTP network with maximum 30 BACnet devices per network
- 3x screw terminal, removable
- 2 service LEDs

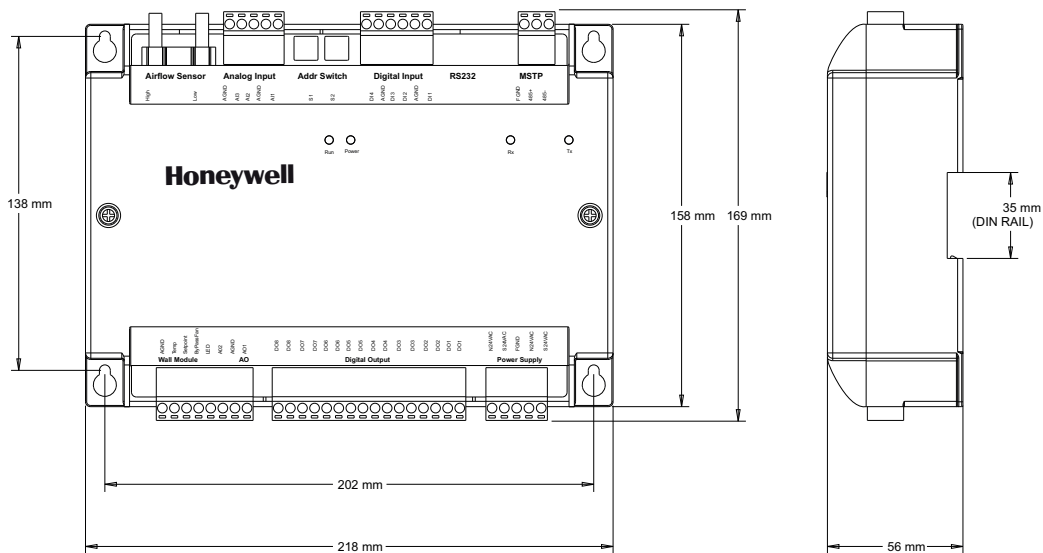
### Models

- CP-VAV: 21 points on board

### Controller Addressing

- Controller from factory with a sticker on the rotary switches, supports both Automatic and Manual MAC addressing:
  - AutoMAC feature is enabled by default (rotary switches are set to FF).
  - Manual MAC addressing is possible by removing the sticker and setting the rotary switches (01 ~ 1F).
- Controller without a sticker on the rotary switches, supports only Manual MAC addressing.

## DIMENSIONS



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