



Excel 10 Constant Volume Air Handling Unit Controller

Reliable, affordable control for commercial buildings

The Constant Volume Air Handling Unit Controllers play a key role in Honeywell's Light Commercial Building Solution (LCBS). They are designed for cost-effective control of constant volume single zone air handling units and heat pumps on a LONWORKS® communications bus or in a standalone application.

The controllers are available in three models:

- A—provides control of small packaged single zone rooftop AHUs and heat pumps with staged heat/cool
- B—provides control of single zone AHUs with stage, floating or pulse width modulation heat/cooling
- C—provides control of single zone AHUs with 4-20mA, stage, floating or pulse width modulation heat/cooling

When used with LCBS and the LonStation front-end, the Constant Volume AHU Controllers provide an excellent, low-cost control solution for small to medium sized commercial buildings.



LONMARK®

The open system advantage

The Honeywell Constant Volume AHU Controller uses the Echelon®

LONMARK® Roof Top

Unit functional profile for openness and interoperability with third party LONMARK devices, giving you the freedom to choose in your system design.

Space and cost-saving installation

Extended operating temperature rating (-40° to +150° F) means you

can mount controllers directly in the control panel of rooftop AHUs, saving installation costs of a separate control panel in the conditioned area.

Setpoint reset features save energy and equipment runtime

Now you won't have to condition air when occupancy doesn't require it: maximize your energy savings with automatic space temperature setpoint reset according to occupied, unoccupied or standby conditions. Just press a button and the bypass feature accommodates your after-hours heating and cooling needs.

Advanced Controllers for Specific Applications

Excel 10 Constant Volume AHU Controller Highlights

As part of the Light Commercial Building Solution, the CVAHU is supported by the LonStation front-end software. This front-end provides easy-to-use building control from a single computer workstation. The controllers fit perfectly in Honeywell's worldwide architecture and interoperate with third party LONMARK®-Compliant devices.

Applications Supported

W7750A Constant Volume AHU Controller (6 relay outputs)

- Single zone AHUs with up to four stages heat/cool
- Packaged or floating economizer
- Water source or air source heat pumps with up to four compressors and four auxiliary heat stages
- Single zone split AHU systems with remote compressors
- One unused digital output can be used as a free point controlled by the network for lighting, exhaust fans

W7750B/C Constant Volume AHU Controllers (B model has 8 triac outputs) (C model has (3) 4-20 mA outputs and 5 triac outputs)

- Single zone AHUs with 4-20 mA heat/cool/economizer for C model only
- Single zone AHUs with up to 4 stages heat/cool
- Single zone AHUs with floating heat/cool/ economizer
- Single zone AHUs with pulse width modulating heat/cool/economizer
- Water source or air source heat pumps with up to 4 compressors and 4 auxiliary heat stages
- Single zone split AHU systems with remote compressors
- Two unused digital outputs can be used as free points controlled by the network for lighting, exhaust fans

Input/Output Data

(not all options are available in all devices)

Analog Input Options

- Space temperature sensor
- Space temperature setpoint
- Outdoor air temperature
- Discharge air temperature
- Return air temperature
- Outdoor air humidity/enthalpy
- Return air humidity/enthalpy
- Filter pressure differential
- Space CO₂

Digital Input Options

- Bypass override button
- Occupancy sensor
- IAQ override
- Dirty filter
- Smoke monitor
- Energy shutdown
- Freezstat
- Time clock
- Proof of airflow
- Economizer enable

Output Options

- 4-20mA 1-3
- Cool stages 1-4
- Heat stages 1-4
- Floating heat
- Floating cool
- Aux. heat stages 1-4
- Fan
- Reserving valve
- Packaged/floating economizer
- Occupancy status
- Pulse width modulation
- Network controlled outputs

Common Features

- Standalone or networked operation
- Occupied/unoccupied and stand-by modes and setpoints
- Heat/cool energy shut down via e.g. window contact
- Flame-retardant construction (UL94-5V)

Network Communication

- Standard Echelon LonMark Roof Top Unit (RTU) functional profile
- High-performance 78K Baud communication
- Free topology transceiver (FTT), polarity free for flexible installation



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