



# VAV-B-AP BACnet

## Variable Air Volume Controller with Belimo Actuator, Pressure Pickup & BACnet Protocol

With over 30 years in the industry, Computrols has established a solid reputation as a leader in automation systems from hardware to software. For VAV applications, Computrols provides the most flexible products available. The VAV-B-AP BACnet provides BACnet communications protocol and BTL certification for a complete VAV solution.



### Product Highlights

#### Position Indicator

Provides a visual indication of position.

#### Manual Override

Pushbutton to allow manual positioning on the damper.

#### Convenient Package

Controller and motor assembly mount directly to VAV boxes in one step.

#### Easily Addressable

Two DIP switches (0-9) allow simple addressing.

#### Removable Screw Terminals

Allows for quick replacement.

#### Status Indicators

Bright on-board LEDs assist in troubleshooting.

#### Precise Pressure Measurement

0-5" pressure pickup provides accurate control for sensitive low-volume applications.

#### Orientation Independent

Unlike many VAV controllers, our controller and pressure pickup can be mounted in any orientation without loss of accuracy.

#### Multiple Actuator Support

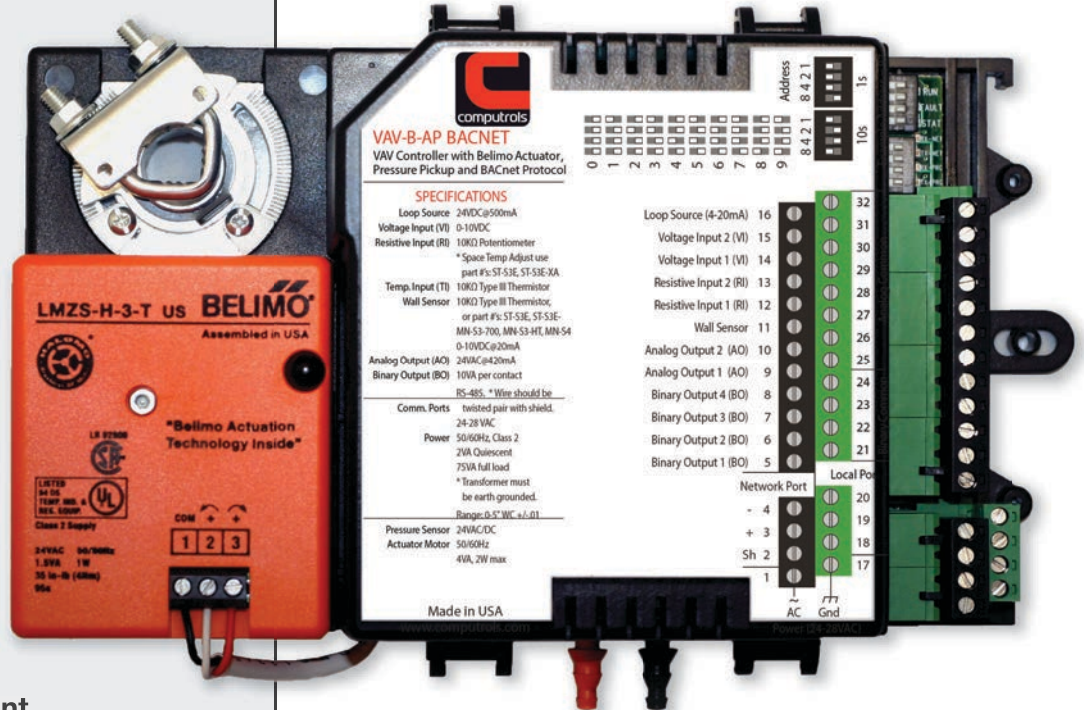
Add an optional damper actuator using either analog or binary outputs. Voltage or resistive inputs for precise damper positioning.

#### Flexible Sensor Capability

Supports 10K Type III thermistors or a selection of digital display wall stats.

#### Simple Configuration

Quickly configure all parameters using our stand-alone configuration tool - free to Distribution Partners.



# VAV-B-AP BACnet

Variable Air Volume Controller with **Belimo Actuator**,  
**Pressure Pickup** and **BACnet Protocol**

A BTL certified product



## Hardware Specifications

<b>Power Supply Input</b>	24VAC $\pm$ 20% 50/60Hz Class 2 transformer
<b>Power Requirements</b>	75VA full load
<b>Analog Input Types</b>	Five total: Four resistance (10K Type III thermistor), one voltage 0-10VDC input. Space Temp/S3 Stat is configurable for use with MN-S3-700 display stat option.
<b>Analog Output Types</b>	Two selectable voltage source output as either 0-10VDC @20mA max analog output.
<b>Loop Source</b>	Fixed 24VDC @ 100mA max loop source.
<b>Binary Output Types</b>	Four 24VAC triac controlled outputs (750 mA max per output).
<b>Damper Outputs</b>	One 24VAC triac controlled damper output for "built-in" floating damper.
<b>Actuator Inputs</b>	One resistive input or use with 10K potentiometer feedback or one 0-10V voltage feedback input.
<b>Actuator Outputs</b>	Torque Rating: 45 lb.-in. (5 N-m) Stroke: Full adjustable from 0° to 90° Timing: Approximately 2 minutes at 60 Hz (3.6 minutes at 50 Hz) for 90° rotation @ 24 VAC Position Indicator: Provides a visual indication of position. Manual Override: Push button to allow manual positioning on the damper. Damper Linkage: 1/2" (12.75 mm) or 3/8" (9.5 mm) diameter round shaft extending 7/8" (22.23 mm) minimum from terminal box.
<b>Velocity Pressure Input</b>	Operating Range: 0.00 to 5.00 in. of W.C. Control Range: 0.01 to 5.00 in. of W.C. Accuracy: $\pm$ 5% @ 1.00 in. of W.C. Sensor Type: Factory calibrated Micro-machine silicon sensor (differential pressure). Tubing Connections: Barb fittings for 0.170" I.D. FRPE polyethylene tubing or 1/4" O.D./0.125 I.D. tygon tubing (high and low pressure taps).
<b>Electrical Connections</b>	Pluggable terminal blocks, capable of accommodating 12-30 AWG wire.
<b>Communication Ports</b>	BACnet MS/TP (RS-485) baud rates: 9600, 19200, 38400
<b>Power Requirements</b>	24VAC $\pm$ 20% 50/60Hz Class 2 transformer

## Hardware Specifications (continued)

<b>Dimensions</b>	4-13/16" W x 8-7/8" L x 2-5/8" H
<b>Ambient Limits</b>	Operating Temperature: 32 to 158 °F Shipping and Storage: -40 to 160 °F Humidity: 5 to 95% RH, non-condensing
<b>Ambient Limits</b>	Surface mount. Conforms to NEMA-1 requirements. Meets UL94-5V flammability for plenum application use.

## Parts & Accessories

Part Number	Description
<b>VAV-B-BACnet</b>	VAV controller with Belimo actuator and BACnet protocol
<b>MN-S3-700</b>	LCD room temperature sensor (200 feet maximum distance from controller).
<b>MN-S3-HT</b>	LCD room temperature and humidity sensor (200 feet maximum distance from controller).
<b>MN-S4</b>	LCD room temperature sensor (200 feet maximum distance from controller) with 3-speed fan control.
<b>MN-COMM</b>	Commissioning program for the MN series wall stats.
<b>ST-COMM</b>	Commissioning program for the MN series wall stats.
<b>TERM-COMM</b>	Commissioning program for the MN series wall stats.
<b>ST-S3E</b>	Space temperature sensor.
<b>ST-S3E-XA</b>	Space temperature sensor with set point adjustment.
<b>ST-D3-XH</b>	Duct temperature sensor.
<b>VP1</b>	Voltage to pressure transducer (3-18 PSI).
<b>PV3</b>	Differential pressure transmitter (Specify 0-1", 0-2", or 0-5" W.C.)
<b>DCM24-44</b>	0-10VDC 44 in.-lb. actuator mfg. by Delta.