ZN341V+ VAV Controllers

AUTOMATEDLOGIC

Zone Controllers with Actuators



The ZN341V+ is a fully programmable, native BACnet Advanced Application Controller that provides zone level temperature and air quality control for pressure-independent VAV applications. Sophisticated preengineered control algorithms reduce energy consumption, extend actuator life, and increase occupant comfort. It communicates on an EIA-485 LAN using BACnet MS/TP or BACnet over ARCNET communications and connects seamlessly to the WebCTRL® building automation system.

Key Features and Benefits

Application Features

- Versatile controller suitable for a variety of applications, including fan coil units, lighting, and exhaust fan control
- Standard library of control programs available for most zoning applications
- Supports EIKON® graphical programming software, an objectoriented tool that provides complete flexibility for any custom control sequence that you need
- Supports Automated Logic® communicating sensors, which are available in a variety of zone sensing combinations and support setpoint adjustment and occupancy overrides
- Supports Automated Logic touchscreen interfaces for managing and troubleshooting the connected equipment easily
- Supports live, visual displays of control logic, which uses real time operational data and aids in optimizing and troubleshooting system operations
- Quick & easy test and balancing process

Hardware Features

- Controls up to 8 points (3 binary outputs, 4 universal inputs and 1 analog output)
- Precision air flow sensor and advanced VAV algorithm increases occupant comfort at both minimum and maximum design air flows, while also extending actuator life
- High-speed, native BACnet over ARC156 communications delivers high speed response when you need it. BACnet over over MS/TP communications is also supported
- Fast, powerful, and fully distributed control allows complete independence from any other devices in the system
- Firmware upgrades can be performed remotely
- Easy startup and commissioning using the WebCTRL system user interfaces

System Benefits

- Connects seamlessly to the WebCTRL building automation system
- Supports demand limiting and optimal start for maximum energy savings



The WebCTRL® building automation system gives you the ability to understand your building operations and analyze the results. The WebCTRL system integrates environmental, energy, security and safety systems into one powerful management tool that allows you to reduce energy consumption, increase occupant comfort, and achieve sustainable building operations. Our web-based platform allows building managers to control and access information about their HVAC, lighting, central plant and critical processes on premises or remotely at any time of day.



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Specifications

BACnet Support: Conforms to the BACnet Advanced Application Controller (B-AAC) Standard Device as

defined in BACnet 135-2001 Annex L. Tested to Protocol Revision 9.

Communication Ports: The following ports are available on the ZN341v+:

EIA-485 port for ARCNET 156 Kbps or MS/TP (9600 bps - 76.8 Kbps)

Local access port for system start-up and troubleshooting

Rnet port for sensors and local operator interfaces

Integral Air Flow Sensor: Precision low flow AWM series 0-2" W.C., sensitive down to ±0.001" W.C. Barbed tapered air flow

connections 3/16" (4.75mm) I.D. tubing

Integral Actuator: Brushless DC motor, torque 35 inch-pounds (4Nm), 5 sq.ft. (0.46m²) maximum damper size. Both

the ZN341v+ is compatible with the optional ZASF integral air flow sensor/actuator assembly for

dual duct applications

Digital Outputs: ZN341v+ has three digital outputs

Relay contact rated at 1A max @ 24V-ac/V-dc, configured normally open

Analog Outputs: One analog output, 0 to 10 V-dc (5mA maximum) with 8-bit resolution

Universal Inputs: Four inputs with 10-bit A/D resolution

Four inputs are configurable for dry contact and type 2 theristors

Inputs 1 and 2 are also configurable for 0 to 5 V-dc Inputs 3 and 4 are available if ZS sensors are used

Microprocessor: High speed 16-bit microprocessor with ARCNET communication co-processor

Memory: 512 KByte non-volatile battery-backed RAM, 1 MByte Flash memory, 16-bit memory bus.

(Shelf life of the battery is 10 years with 10,000 hours of continuous operation.)

Status Indicators: LED status indicators for EIA-485 communication, running, error, power and all digital outputs

Module Addressing: Rotary dip switches for intuitive network addressing of modules

Protection: Built-in surge and transient protection circuitry for power, communications, inputs and outputs

Listed by: UL916 (Canadian Std C22.2 No. 205-M1983), CE, FCC Part 15 - Subpart B - Class A

Environmental 0°F to 130°F (-17.8°C to 54.4°C); 10 to 90% relative humidity, non-condensing

Operating Range: NOTE: Control modules must be installed within the building

Power Requirements: $24 \text{ V-ac} \pm 10\%$, 26 V-dc (25 V min, 30 V max), 50 to 60Hz, 20 VA

Physical: Rugged GE C2950 Cycoloy plastic; UL94-5VA plenum rated enclosure

Weight: 1 lb. 11 oz. (0.8 kg)

Dimensions: Overall Mounting*

Width: 6-1/2" (165mm)

Height: 7" (178mm) Depth: 2-1/2" (64mm) min. panel depth One mounting hole as shown at left with 5-5/8" (143mm) spacing (height) from shaft center line.

* For indoor use only

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1150 Roberts Boulevard, Kennesaw, Georgia 30144 770-429-3000 Fax 770-429-3001 | www.automatedlogic.com

