

# ZN341A VAV CONTROLLERS

ZONE CONTROLLERS WITH ACTUATORS



## CONTROLLER FOR THE WEBCTRL® BUILDING AUTOMATION SYSTEM

The ZN341A is a fully programmable, native BACnet advanced application controller that provides zone level temperature and air quality control for pressure-independent VAV applications. Sophisticated pre-engineered control algorithms reduce energy consumption, extend actuator life, and increase occupant comfort. It communicates on an EIA-485 LAN using BACnet MS/TP 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 object oriented tool that provides complete flexibility for any custom control sequence that you need
- Supports Automated Logic communicating ZS sensors, which are available in a variety of zone and equipment 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, helping operators troubleshoot and optimize system operations
- Quick and easy test and balancing process

### Hardware Features

- Separable actuator with a 45-inch pound (5Nm) torque rating that can be mounted up to a maximum distance of 300 feet from the controller
- Controls up to 8 points (3 binary outputs, 4 universal inputs and 1 analog output)
- Precision differential pressure sensor and advanced VAV algorithm increase 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 MS/TP communications is also supported
- Fast, powerful, and fully distributed control allows complete independence from any other devices in the system
- Large termination strips for easy installation
- Firmware upgrades can be performed remotely



The WebCTRL building automation system gives you the ability to understand your building operations and analyze the results. Integrate environmental, energy, security and safety systems into one powerful management tool that helps you reduce energy consumption, increase occupant comfort, and achieve sustainable building operations.

# SPECIFICATIONS



Part #	ZASF-A Secondary VAV Damper
BACnet Conformance	BTL Tested and conforms to the BACnet Advanced Application Controller (B-AAC) Standard Device Profile as defined in ANSI/ASHRAE Standard 135-2012 (BACnet) Annex L, Protocol Revision 9
Power	24 Vac +/- 10%, 50 - 60 Hz, 20 VA (38.4 VA with a BACview® device attached) single Class 2 source only, 100 VA or less
Communication	
Actuator	Belimo brushless DC motor, torque 45 inch-pounds (5 Nm), runtime 154 seconds
Act Net Port	To connect the actuator cable, the ZASF-A, and up to 2 OptiPoint™ smart valves
BACnet Port	For communication with the controller network using ARC156 or MS/TP (9,600 bps-76.8 kbps)
Rnet Port	Supports: - Up to 5 wireless and/or ZS sensors - One Equipment Touch or OptiPoint interface Supplies 12 Vdc/200 mA power to the Rnet at an ambient temperature of 77°F (25°C) with a 24 Vac nominal power source
Local Access Port	For system start-up and troubleshooting
Inputs: 4 inputs configurable for thermistor or dry contact. Inputs 1 and 2 are also configurable for 0-5 Vdc	
Resolution	10 bit A/D
Resolution	10 pulses per second. Minimum pulse width (on or off time) required for each pulse is 50 msec
Outputs	
Binary Output	3 N.O. binary outputs, relay contact rated at 1 A max. @ 24 Vac/Vdc. Configured normally open
Analog Output	1 analog output, 0-10 Vdc (5 mA max)
Resolution	8 bit D/A
Status Indicators	LEDs indicate status of communications, running, errors, power, and binary outputs
Environmental Range	32 to 130°F (0 to 54.4°C), 10–90% relative humidity, non-condensing
Integral Airflow Sensor	Precision differential pressure sensor 0–2 in. H2O, sensitive down to ±0.001 in. H2O. Barbed tapered airflow connections accept 3/16 in. (4.75 mm) I.D. tubing. Allows for readings across the 0–2in. H2O range, accurate to ±5% of full flow at 2 in. H2O
Protection	Built-in surge and transient protection for power and communications in compliance with EN61000-6-1
BT485 Connector	Attach a BT485 (not included) to a controller at the beginning and end of a network segment to add bias and to terminate a network segment
Compliance	<b>United States:</b> FCC compliant to Title CFR47, Part 15, Subpart B, Class A. UL Listed, File E143900; CCN PAZX, UL916, Energy Management Equipment; <b>AS/NZS:</b> RCM IEC Mark 61000-6-3; <b>Canada:</b> UL Listed File E143900, CCN PAZX7, CAN/CSA C22.2 No. 205 Signal Equip., Industry Canada Compliant, ICES-003, Class A; CE Mark Compliant with 2014/30/EU, and RoHS Compliant: 2015/863/EU; <b>UKCA</b> Mark compliant with Electromagnetic Compatibility Regulations 2016 – Gov.UK and RoHS for Electrical and Electronic Equipment 2012
Plastic Rating	Fire-retardant plastic ABS, UL94-5VA
Memory	512 kB non-volatile battery-backed RAM, 1 MB Flash memory, 16-bit memory bus
Battery	10-year Lithium CR2032 battery retains the following data for a maximum of 10,000 hours during power outages: control programs, editable properties, schedules, and trends

● Figure 1: Physical Dimensions



### Controller Overall Dimensions

	in.	cm
Width:	6.4	16.3
Height:	5.7	14.5
Depth:	2.1	5.3
Weight:	1.8 lbs	0.82 kg

Assembled in the United States

### Actuator Overall Dimensions

	in.	cm
Width:	3.0	7.6
Height:	5.9	15.0
Depth:	2.5	6.4

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