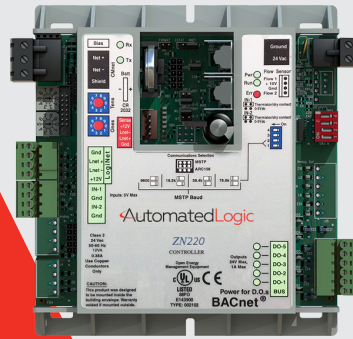# ZN220 ZONE CONTROLLER

## ZONE CONTROLLER

**Automated Logic**

## CONTROLLER FOR THE WEBCTRL® BUILDING AUTOMATION SYSTEM

The ZN220 is a fully programmable, native BACnet Advanced Application Controller (AAC) designed for controlling a single zone in a building. It communicates on an EIA-485 LAN using BACnet MS/TP 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 object oriented 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 and equipment sensing combinations and support setpoint adjustment and occupancy overrides

- Supports OptiPoint™ touchscreen interfaces for managing and troubleshooting the connected equipment easily and for occupant engagement

- Supports live, visual displays of control logic, helping operators troubleshoot and optimize system operation

- Quick and easy test and balancing process

### Hardware Features

- Controls up to 4 points (2 binary outputs and 2 universal inputs)

- Supports native BACnet over MS/TP communications

- 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 WebCTRL interfaces

- Supports demand limiting and optimal start for maximum energy savings

- Connects seamlessly to the WebCTRL building automation system

**WebCTRL®**

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 # | ZN220<br>Zone Controller |
|---|---|
| BACnet Conformance | BTL Tested and conforms to the BACnet Advanced Application Controller (B-AAC) standard device profile, as defined in BACnet 135-2012 Annex L, Protocol Revision 9 |
| Power | 24 Vac +/- 10%, 50 - 60 Hz, 12 VA  \|  26 Vdc (25 V min, 30 V max) |
| Communication | |
| BACnet Port (CMnet) | Communication with the controller network using MS/TP (9,600 bps) |
| Rnet Port | 12VDC @ 210mA supporting:<br>-Up to 5 wireless and/or ZS sensors - freely mix ZS zone, ZS duct, ZS immersion and ZS outdoor sensors<br>-One Equipment Touch or OptiPoint display |
| Local Access Port | For system startup and troubleshooting |
| Inputs | |
| Universal | 2 inputs with 10-bit A/D resolution configurable for 0 - 5 Vdc, thermistor or dry contact |
| Pulse Frequency | 10 pulses per second.  Minimum pulse width (on or off time) required for each pulse is 50 msec. |
| Outputs | |
| Digital Output | 2 digital outputs, relay contacts rated at 1 A max @ 24 Vac/Vdc.  Configured normally open. |
| Status Indicators | LED's indicate status of communications, running, errors, power, and digital outputs |
| Environmental Range | 0 to 130°F (-17.8 to 54.4°C), 10–90% relative humidity, non-condensing |
| Memory | 512 kb non-volatile memory 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 |
| Protection | Built-in surge and transient protection for power and communications in compliance with EN61000-6-1 |
| Compliance | **United States:** FCC compliant to Title CFR47, Part 15, Subpart B, Class A; **AS/NZS:** RCM Mark, IEC 61000-6-3; **Canada:** UL916 (PAZX) cUL-916 (PAZX7); CE Mark Compliant with 2014/30/EU, and RoHS Compliant: 2015/863/EU; **UKCA** Mark compliant with Electromagnetic Compatibility Regulations 2016 – Gov.UK and RoHS for Electrical and Electronic Equipment 2015, 863, eU, REACH compliant |
| Plastic Rating | Rugged GE C2950 Cycoloy plastic |
| 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. |

● **Figure 1: Physical Dimensions**
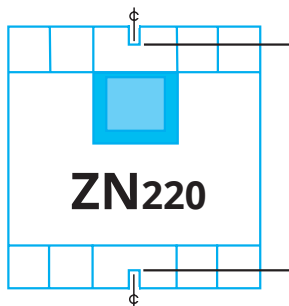


Mounting hole spacing 5-5/16".

Mounting:

2 mounting holes center line

with 5.31 in. spacing

*For indoor use only.

|  | in. | cm |
|---|---|---|
| **Width:** | 5.06 | 12.85 |
| **Height:** | 5.69 | 14.45 |
| **Depth:** | 1.5 | 3.81 |
| **Weight:** | 0.6 lbs | 0.27 kg |

Assembled in the United States