

BZ424-LX Configurable VAV Zone Controller

ONYXX[®] LX VAV-ASC | PRODUCT DATA SHEET

Designed and assembled in Canada

Description

- ✓ Supports BACnet MS/TP
- ✓ Has 4 AI/BIs, 2 AOs & 4 BOs with local HOA switches for the outputs
- ✓ Uses a pre-calibrated, precise digital MEMS Omron flow through airflow sensor
- ✓ BTL certified as a B-ASC (BACnet Application Specific Controller)
- ✓ Supports up to 3 TZ100-LX or TZ200-LX room sensors
- ✓ Requires Onyx LX USB to RS-485 adapter to program with Onyx LX UI
- ✓ To order use part number: **BZ424-LX**

ONYXX[®] LX



Application

This controller is designed to facilitate control and management of various VAV equipment typically used in the HVAC industry. It allows powerful yet flexible solutions that can be tailored and sized according to any project needs. Single or dual duct, with or without fan.

Technical Specifications

POWER SUPPLY

- 24 Vac/dc \pm 15%
- 2 A replaceable fuse
- LED power indicator

CURRENT CONSUMPTION

- 5 VA controller only
- Up to 48 VA (8 VA each) with the 4 BOs and 2 AOs @ 0.35 A each

INPUTS

- 4 x AI/BIs universal inputs
- Thermistor 10 K Ω Type 2 or 3)
- Dry contact, 500 ms minimum (On-Off)
- Voltage 0 - 10 Vdc (Input impedance of 100 K Ω)
- Current 0 - 20 mA (internal resistance of 162 Ω)
- Resolution: 12 bits (4,096 segments)

OUTPUTS

- 2 x BOs Triad
- External or internal powered (jumper selectable)
- 10 to 30VAC/VDC, 0.35A max+
- Built-in thermal overcurrent protection (automatic reset)
- Supports PWM (Pulse-width modulation)
- 2 x AOs
- Voltage 0 - 10 Vdc linear

INTERNAL ACTUATOR OUTPUTS

- 2 BO Triad
- 1 extra AO for analog actuators

AIR FLOW SENSOR

- MEMS Omron D6F-PH
- 1 in. / 250 PA range with rapid response.
- Resolution: 12 bits (4,096 segments).
- 5/32 in. tubes required for airflow probe.

REAL-TIME CLOCK (RTC)

- Built in with one-week capacitor backup when charged

MICROPROCESSOR

- STM32 (ARM Cortex[™] M3)
- 32 bits, 72 MHz

MEMORY

- Flash: 768 KB non-volatile for the application program
- RAM: 96 KB

RS485 BACNET MS/TP COMMUNICATION SPEED

- 9600, 19200, 38400, 76800 Bps

CONTROLLER ADDRESSING

- Via DIP switch

EXTERNAL CONNECTIONS

- Mini USB Type-A connector allows local access to the MS/TP network.
- Requires the USB to RS-485 adapter: USB-MSTP-LX.

FLOATING ACTUATOR SUPPLIED

- Belimo LMB24-3-T
- 45 in./lb. 5 Nm

TZ100-LX/TZ200-LX WALL INTERFACE

- Up to 3 controllers based on solution used.
- Daisy-chained wiring on local RS-485 port.

COMMUNICATION PROTOCOLS

- BACnet MS/TP

DIMENSIONS

- 4.9 in. x 8.5 in. x 2.5 in.
- 123 mm X 215 mm X 63 mm

WIRE SIZE

- 18-24 AWG accepted; 18 recommended

STOCKING TEMPERATURE

- 30 °C to 50 °C / -22 °F to 122 °F

OPERATING CONDITIONS

- 25 °C to 45 °C / -13 °F to 113 °F
- 10% to 90% RH without condensation

WEIGHT

- 744 g. / 1.5 lb.

MOUNTING TYPE

- Standard Belimo mounting hardware.
- Directly on VAV shaft and duct.

WARRANTY

- 1 year

ENCLOSURE

- Black color, ABS material UL94-5V
- Material FR/ABS

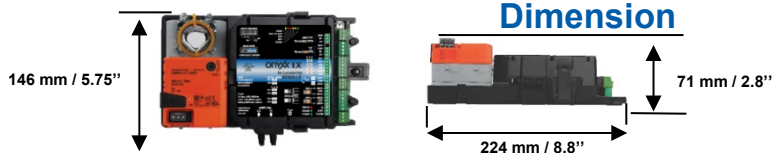
CERTIFICATIONS

- UL 916 Energy Management Equipment
- BTL listed: B-ASC, BACnet Application Specific Controller



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WARNING: Internally, this device utilizes a half-wave rectifier and therefore can only share the same AC power source with other half-wave rectified devices



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2900 NE Independence Ave
Lees Summit, MO 64064
sales@lynxpring.com
1 (877) 649-5969

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www.lynxpring.com

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Revised 4/26/2023
Onyx-BZ424-LX-DS-V1.2