

BZ122-LX Configurable VAV Zone Controller

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

Designed and assembled in Canada

Description

- ✓ Supports BACnet MS/TP
- ✓ Has 1 AI/BI, 2 AOs & 2 BOs
- ✓ 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: **BZ122-LX**

ONYXX[®] LX
BY LYNXSPRING



Application

This controller is designed to facilitate control and management of simple VAV equipment typically used in the HVAC industry. It allows powerful yet flexible solutions that can be tailored and sized according to any project need.

Technical Specifications

POWER SUPPLY

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

CURRENT CONSUMPTION

5 VA controller only
Up to 32 VA (8 VA each) with the 2 BOs and 2 AOs @ 0.35 A each

INPUTS

- 1 x AI/BIs universal input
- 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
- 10 to 30 Vac/dc, 0.35 A maximum
- Sink or source
- Built-in overcurrent protection
- Thermal protection with automatic reset
- Triad BOs can be used as pulse outputs.
- 2 x AOs (no override switches)
- 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 AWG 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

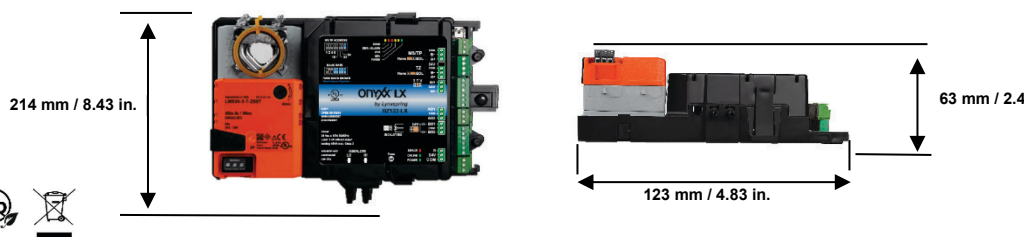
ENCLOSURE

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

CERTIFICATIONS

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

Dimension



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