

### BZU-1

The BZU-1 boiler zone unit is a microprocessor based controller for adding additional heating zones to hydronics systems that are being controlled by an iWorX BLR Series boiler controller. It may also be used as a stand-alone zone controller. This application includes control of up to five heating zones or snow melt zones and a common heat source.

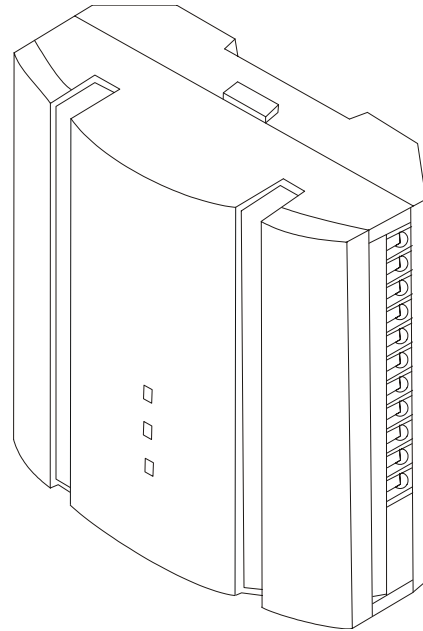
### Overview

Five analog inputs are provided for zone temperature sensors. A digital input is available for a plant alarm. Up to five zone valves or pumps are controlled by digital outputs. An additional digital output is provided for a heat demand output.

The controller is based on the LONWORKS® networking technology, and communicates with the BLR Series controller over the network. The controller can also be networked to a higher-level control system for monitoring and control applications.

### Features

- Control of up to five heating zones with individual sensor inputs and isolated outputs
- Networking capability of up to 8 units (40 zones)
- Individual temperature setpoints for occupied heating of each zone
- Common temperature setpoint for unoccupied heating
- Proportional plus integral (P+I) control of heating
- Heat demand output for a common pump or non-networked heat source
- Heat demand and snow melt demand communicated to a BLR-1 boiler control
- Outdoor cutoff temperatures available when used with a BLR-1
- Snow melt mode with melting and idling setpoints when used with a BLR-1
- LONWORKS® interface to building automation systems and host products
- Automatic configuration with a Local Control Interface (LCI) touchscreen
- Alarm/Event reporting



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# Specifications

## Electrical

### Inputs

- Cabling: twisted shielded pair, 18 AWG recommended—500 feet max. (152 meters)
- Resolution: 10 bit

### Zone Temperatures

- Precon Type III 10K thermistor

### Plant Alarm

- Dry Contact
- Normally Open
- 5 Volts DC Max

### Outputs

#### Heating Zone Pumps, Heating Demand

- 24 Volts AC
- 1 Amp at 50 °C, 0.5 Amps at 85 °C

### FTT-10A Network

- Speed: 78 KBPS
- Cabling: Maximum node-to-node distance: 1312 feet (400 meters)
- Maximum total distance: 1640 feet (500 meters)
- 42.4 Volts DC max

**Table 1: Network Wire Specifications**

Cable Type	Pairs	Details	Connect Air Catalog No.
Level 4 22AWG (0.65mm)	1	Unshielded, Plenum, U.L. Type CMP	W221P-2001
Level 4 22AWG (0.65mm)	1	Unshielded, Non-Plenum, U.L. Type CM	W221P-1002

For detailed specifications, refer to the FTT-10A Free-Topology Transceiver User's Guide published by Echelon Corporation. For information on ordering Connect Air items, contact Connect Air International; 4240 B Street; Auburn, WA 98001 <[www.connect-air.com](http://www.connect-air.com)>.

## Power

### Power Requirements

- 24 VAC nominal (requires an external supply)

### Power Consumption

- With no external loads: 15 VA

## Mechanical

### Housing

- Dimensions: 4 3/8" high, 4 5/16" wide, 2" deep (111 mm high, 110 mm wide, 51 mm deep)
- ABS Polycarbonate

### Weight

- Controller Weight: 0.45 pounds (0.22 kilograms)
- Shipping Weight: 0.60 pounds (0.28 kilograms)

### Electronics

- Processor: 3150 Neuron 10 MHz
- Flash: 48 Kilobytes
- SRAM: 8 Kilobytes
- Termination: 0.197" (5.0 mm) Pluggable Terminal Blocks, 14-22 AWG

### Environmental

- Temperature: -40 °F to 185 °F (-40 °C to 85 °C)
- Humidity: 0 to 90%, non-condensing

### Agency Listings

- UL916

### Agency Compliances

- FCC Part 15 Class A
- CE