BZU2 Hydronic Zoning Control
Self-Contained Interoperable Controller Model UCP-1

SUPERSEDES: November 12, 2010　　　　　　　　　　　　　　　　EFFECTIVE: June 11, 2012

Job: _____　　Engineer: _____

Contractor: _____　　Rep: _____

Date: _____　　Tag/Item #: _____

BZU2

The BZU2 hydronic zoning control is a microprocessor-based controller for adding additional heating zones to hydronics systems that are being controlled by an iWorx® BLM Series boiler controller. It may also be used as a stand-alone zone controller. This application includes control of up to five heating zones and a general heat demand.

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 BLM 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 outputs
- Networking capability of up to 24 units (120 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 zone demand are communicated to a BLM Series boiler control
- Outdoor cutoff temperatures available when used with a BLM Series or ASM2 Controller
- LONWORKS® interface to building automation systems and host products
- Automatic configuration with a Local Control Interface (LCI) touchscreen
- Alarm/Event reporting
- LonWorks interface to building automation systems

Specifications
Electrical
Inputs
- Cabling: twisted shielded pair, 18 AWG recommended—500 feet max. (152 meters)
- Resolution: 10 bit
Thermistor Inputs
- Precon Type III 10K thermistor, precon type II 10K thermistor or Taco Series T101 thru 103

Switch Input
• Dry Contact
• Nomally closed; software selectable
• 5 Volts DC Max

Outputs
• 24 VAC
• 1A @ 50C, 0.5A @ 60C, limited by the Class 2 supply rating

Power

Power Requirements
• 24VAC (20VAC to 28VAC), requires an external Class 2 supply

Power Consumption
• 7.2W with no external loads, maximum limited by the class 2 supply rating

Recommended Sensor Wire

Cable Type	Pairs	Details	Taco Catalog No.
18AWG	1	Stranded Twisted Shielded Pair, Plenum	WIR-018

FTT-10A Network
• Speed: 78KBPS
• 42.4 Volts DC max
• Cabling: Maximum node-to-node distance: 1312 feet (400 meters)
• Maximum total distance: 1640 feet (500 meters)

Cable Type	Pairs	Details	Taco Catalog No.
Level 4 22AWG (0.65mm)	1	Unshielded, Plenum, U.L. Type CMP	WIR-022

For detailed specifications, refer to the *FTT-10A Free-Topology Transceiver User's Guide* published by Echelon Corporation (www.echelon.com/support/documentation/manuals/transceivers).

Mechanical

Housing
• Dimensions: 5.55" (141mm) high, 6.54" (166 mm) wide, 1.75" deep (44 mm)
• ABS

Weight
• Controller Weight: 0.70 pounds (0.32 kilograms)
• Shipping Weight: 1.0 pounds (0.46 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: 32 °F to 140 °F (0 °C to 60 °C)
• Humidity: 0 to 90%, non-condensing

Agency Listings
• UL Listed for US and Canada, Energy Management Equipment PAZX and PAZX7.

Agency Compliances

• FCC Part 15 Class A

Controls Made Easy®

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