

ZXU1 Mixing Loop Control - Single Zone
Self-Contained Interoperable Controller Model UCP-1

SUPERSEDES: November 12, 2010

EFFECTIVE: June 11, 2012

Job: _____ Engineer: _____
Contractor: _____ Rep: _____
Date: _____ Tag/Item #: _____

ZXU1

The iWorx® ZXU1 is a stand-alone microprocessor-based controller for one injection loop.

Overview

The ZXU1 provides injection mixing for one loop. The loop has a Supply and a Return Temperature and can be configured separately. Outdoor Air Temperature, Radiant Slab Temperature and Zone Temperature are also provided.

A Boiler Enable and a Primary Pump signal are provided if the loop has a demand. Demand can come from several sources.

Demands can be configured and processed as a heating or cooling demand.

It is assumed that all the boiler operations are taken care of elsewhere, possibly coupled with a BLM controller.

The iWorx® controller is based on the LONWORKS® networking technology. The controller can be networked to a higher-level control system for monitoring and control applications.

Features

- Heat/Cool control selectable
- Heat Demand and Cool Demand inputs are provided
- Temperature alarms
- Modulating mixing output with adjustable min and max settings from 0-10V
- Loop has a separate Supply Temperature, Return Temperature, Radiant Slab Temperature and Pump signal
- Advanced Outdoor Air drybulb calculation
- Room Temperature for zone control
- Snowmelt mode with extended features
- Heat Demand and Cool Demand outputs provided
- Standalone configuration
- Outdoor Air Temperature for standalone mode
- Boiler Enable signal and Primary Pump signal available
- Boiler Protection
- LONWORKS interface to building automation systems.
- Automatic configuration with the iWorx® Local Control Interface (LCI)

Specifications

Electrical

Inputs

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

Indoor Air Humidity

- 0-10 Volt

Outside Air Temperature, Supply Temperature, Return Temperature, Zone Temperature, Radiant Slab Temperature

- Precon Type III 10K thermistor

Heat Demand, Cool Demand

- Dry Contact
- Normally Open

Outputs

Zone Pump, Heat Demand, Cool Demand, Primary Pump, Snow Melt Pump, Boiler Enable, Reversing Valve

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

Modulating Output

- 0-10 Volt
- 2K Ohm minimum load
- 8 bit resolution

Recommended Sensor Wire

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

FTT-10A Network

- Speed: 78KBPS
- 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).

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

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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