

SMZ1 Hydronic Snow Melt Zone Controller
Self-Contained Interoperable Controller Model UCP-1

SUPERSEDES: April 15, 2013

Plant ID: 001-4167

EFFECTIVE: August 14, 2013

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

SMZ1

The SMZ1 is a self-contained microprocessor-based controller for up to 4 snow melt zones.

Overview

The SMZ1 is a hydronic snow melt zone controller capable of regulating up to four zones. Each zone has two inputs: one for slab temperature and one for a snow sensor. Temperature inputs are standard Precon III thermistors. The snow sense inputs use standard dry-contact snow sensors, available from Taco. There are also Global Snow melt Enable and Outside Air Temperature inputs. Each zone has a digital output and a modulating output suitable for valves or circulators. There are also digital outputs for two Group Circulators, one Primary Circulator and Heat Demand.

The controller is based on LONWORKS[®] networking technology. The controller communicates with the BLM and HPM series controllers 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 four snow melt zones with individual sensor inputs and isolated outputs
- Separate setpoints for idling and active snow melting
- Proportional plus integral (P+I) control
- Primary Pump output for a common pump or non-networked heat source
- Snow Melt Demand communicated to a BLM series boiler controller or HPM heat pump master controller
- Outdoor Air Cutoff temperature
- Configurable group circulators for assigning different heat sources to different groups of zones
- Automatic configuration with a Local Control Interface (LCI) touchscreen
- Alarm/Event Reporting

SPECIFICATIONS

Electrical

Inputs

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

ZoneSlab 1/2/3/4 Temperature

- Precon Type III 10K thermistor

Global or Zone Snow Melt

- Dry Contact
- Normally open

Outdoor Air Temperature

- Precon Type III 10K thermistor

Outputs

Zone 1/2/3/4 Modulating Output

- 0-10 VDC

Primary/Group 1/Group 2 Circulator, Zone 1/2/3/4 Out

- 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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