

# Uponor

## RADIANT HEATING SYSTEMS SNOW MELT ENABLE KIT

### INSTRUCTION SHEET



### Introduction

The Uponor Snow Melt Enable Kit (part number A3040039) provides the user with the ability to start and stop an Uponor snow and ice melting system. This module also adjusts the running time of the system.

The Snow Melt Enable Kit works specifically with the following Uponor snow and ice melting controls, which feature a tN2 terminal to support the module.

- proMIX™ 212
- SYSTEMpro™ 311
- SNOWpro™ 411

**Note:** Do not use this module with the Uponor proMIX 101 or proMIX 201, which do not support a tN2 device.

### Installation

#### Removing the Front Cover

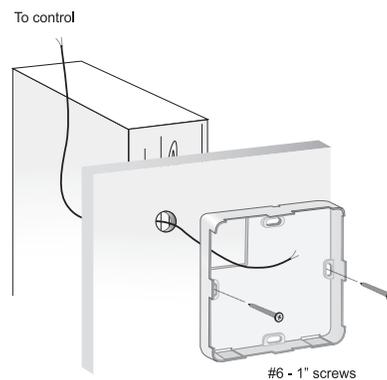
Refer to the following instructions to properly remove the front cover for installation.

1. Place a screwdriver or similar object into the small slot located in the top of the module.
2. Push the screwdriver against the plastic tab and pull the top of the front cover so that it pivots around the bottom edge of the module.

### Mounting the Module

Refer to the following instructions to properly mount the module.

1. Securely install the base of the module in the desired location.
2. Mount the module directly to the desired location using two #6 – 1" screws.



3. Insert the screws through the mounting holes and securely fasten them to the desired location. If possible, at least one of the screws should enter a wall stud or similar surface.

**Note:** If mounting to a 2x4 electrical box, use a Cover Plate (part number A3040007). This plate mounts to the electrical box, and the module, in turn, mounts to the plate.

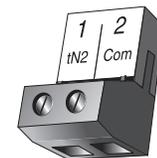
### Wiring the Module

Refer to the following instructions to properly wire the module.

1. Run 18 AWG twisted pair or similar wire between the module and the control.

2. Insert the wires through the hole provided in the back of the module enclosure and connect them to the Com and tN2 terminals.

- When wiring to the proMIX 212, connect to tN2 and Com (terminals 24 and 27)
- When wiring to the SYSTEMpro 311, connect to tN2 and Com (terminals 27 and 30)
- When wiring to the SNOWpro 411, connect to Com and tN2 (terminals 9 and 10)



**Caution:** Do not run the wires parallel to telephone or power lines as this may interfere with the operation of the module. If the module wires are located in an area with strong sources of electromagnetic noise, use shielded cable or run the wires in a grounded metal conduit.

**Caution:** Do not apply power to the module. Wire the module directly to the control. Because the connection between the control and the module is polarity sensitive, ensure the Com terminal of the module is connected to the appropriate terminal of the control. If the wires are reversed, the module will not function and the control will display a short circuit error for the tN2 device.

## Installing the Front Cover

Refer to the following instructions to properly install the front cover.

1. Align the hinges on the bottom of the front cover with the bottom of the module mounting base.
2. Pivot the front cover around the bottom hinges and push the top against the mounting base until it snaps firmly in place.

## Settings

### Setting the Running Time

To set the desired running time, turn the dial on the module until the desired running time is displayed in the window.

**Note:** If you select an infinite (no limit) run time, the snow and ice melting system runs continuously until warm-weather shut down (WWSD) or cold-weather cut off (CWCO) occurs, or until someone presses the start/stop button on the module.

### Limiting the Time Range

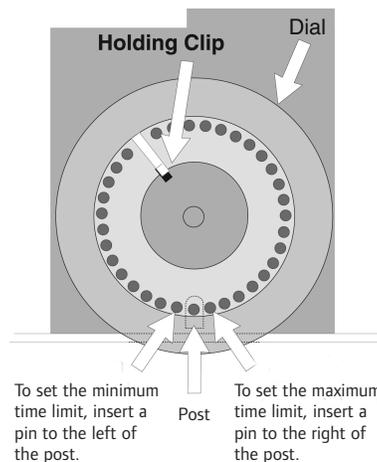
You can limit the time range on the module to avoid extreme time settings or any tampering with the setting. Refer to the following instructions to properly limit the time range.

1. Turn the dial until the desired time is at the bottom of the module.
2. Remove the front cover by following the steps in the Removing the Front Cover section of this instruction sheet.
3. Lift and pull the scale off the dial. Be careful not to turn the dial while removing the scale.
4. With the scale off, a series of small holes are visible around the dial.
5. Behind the dial there is a post, which can be used to limit the rotation of the dial. Two aluminum limit pins are provided in the dial. Refer to the Setting a Minimum Time Limit section for specific instructions about how to set the limits (minimum, maximum and fixed).

### Setting a Minimum Time Limit

Refer to the following instructions to set a minimum time limit.

1. Remove one of the limit pins and re-insert it into the hole that is slightly to the left of the post at the bottom of the dial.
2. With the pin in place, the dial should only rotate clockwise from its current position because the counterclockwise rotation is now restricted by the pin.



### Setting a Maximum Time Limit

Refer to the following instructions to set a maximum time limit.

1. Remove one of the limit pins and re-insert it into the hole that is slightly to the right of the post at the bottom of the dial.
2. With the pin in place, the dial should only rotate counterclockwise from its current position because the clockwise rotation is now restricted by the pin.

### Setting a Fixed Time

Refer to the following instructions to set a fixed time.

1. Insert one of the pins into the hole located in the bottom of the dial so the pin enters the post behind the dial.
2. With the pin in place, the dial is fixed in position.

### Replacing the Scale

After making the proper settings, refer to the following instructions to replace the scale.

1. Replace the scale by sliding it onto the dial until the rectangular hole slips into the holding clip.
2. Replace the front cover by reversing the steps in the Removing the Front Cover section of this instruction sheet.

## Operation

### Starting the Snow and Ice Melting System

To start the snow and ice melting system, press and release the button on the face of the module.

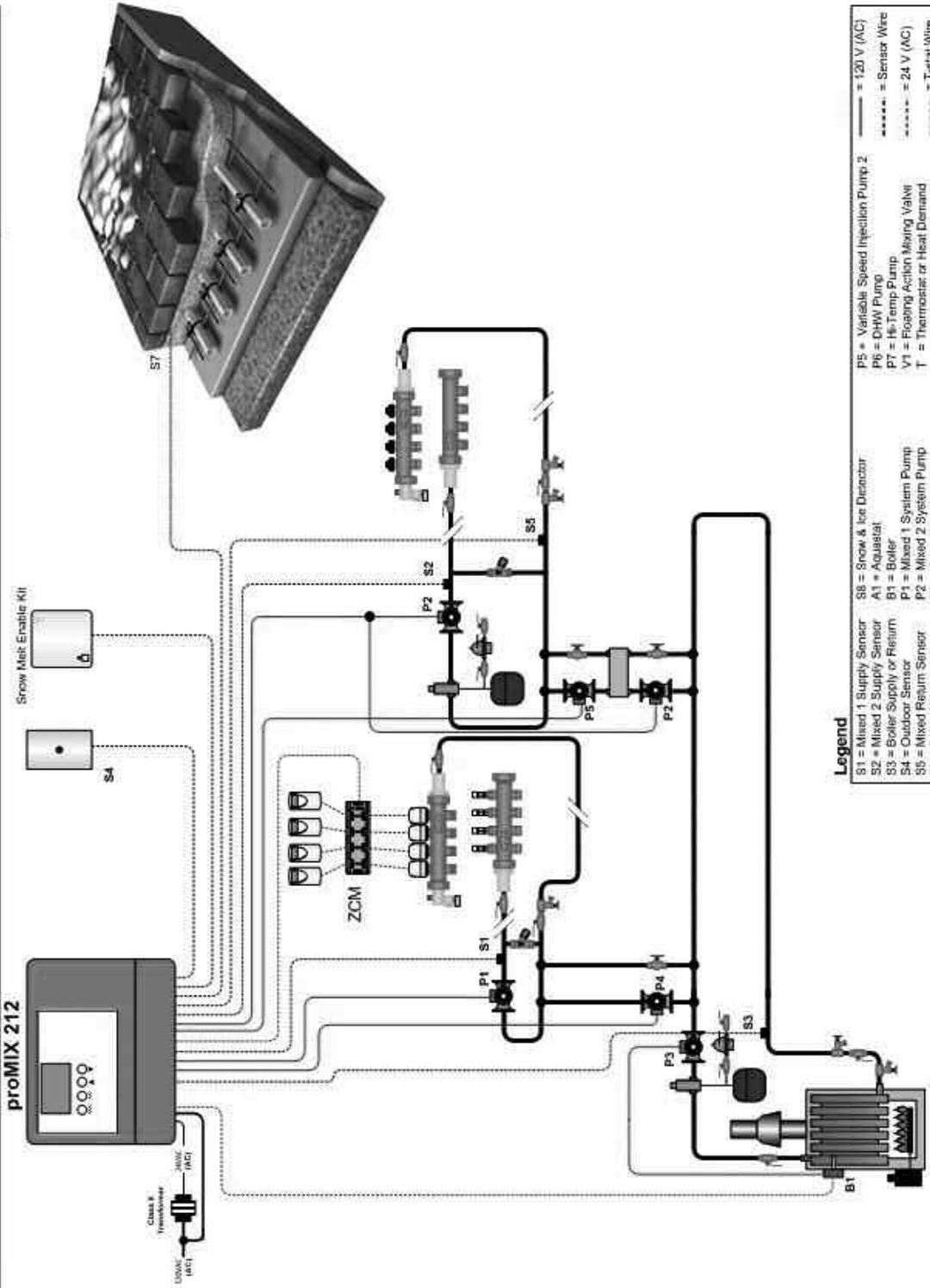
### Indicator Light

The indicator light on the face of the module provides a visual indication of the current operating status of the snow and ice melting system. Refer to **Table 1** on page 6 for an explanation of each indicator light.

### Stopping the Snow and Ice Melting System

To stop the snow and ice melting system, press and release the button on the face of the module.

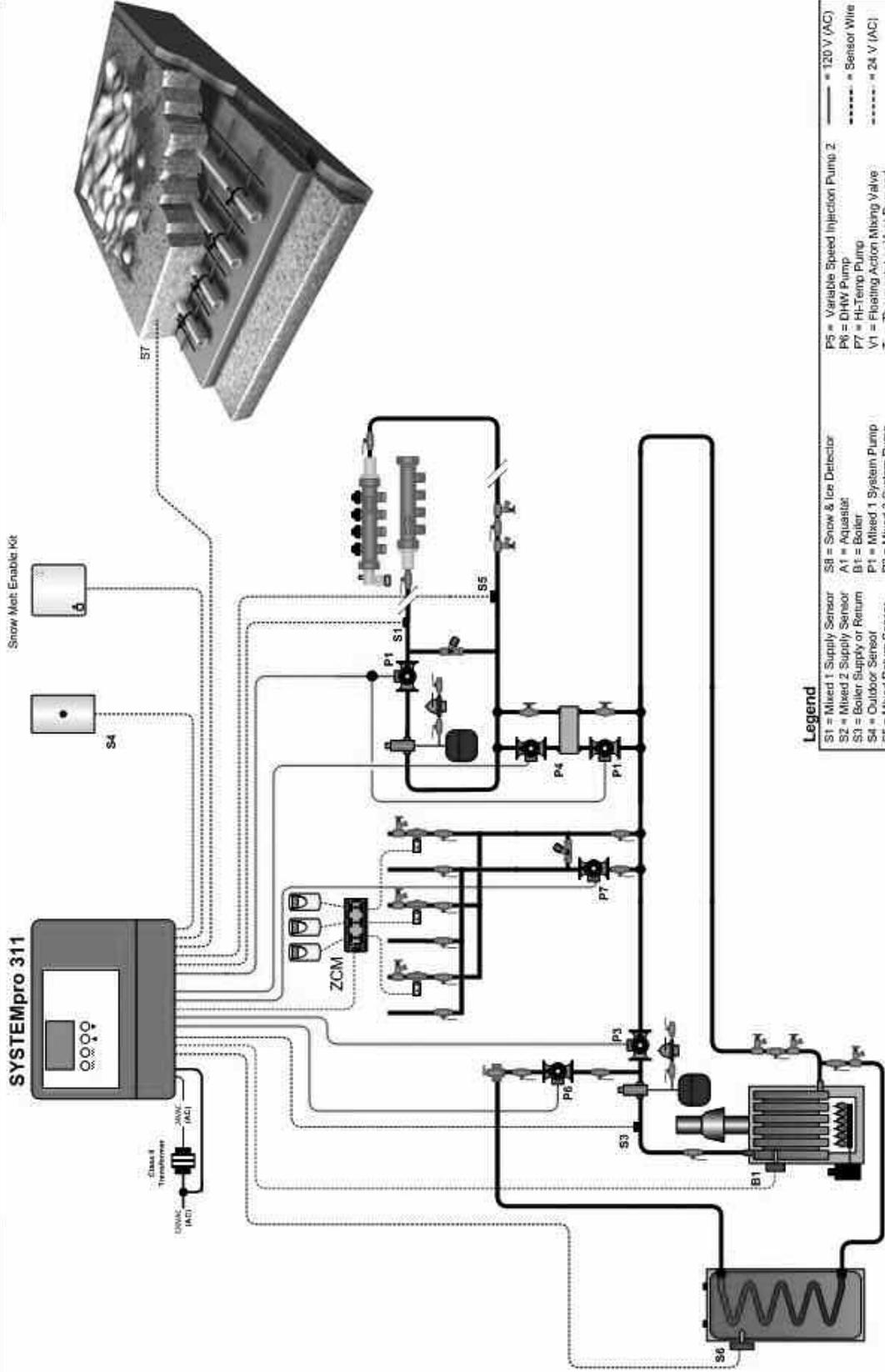




**Legend**

- S1 = Mixed 1 Supply Sensor
- S2 = Mixed 2 Supply Sensor
- S3 = Boiler Supply or Return
- S4 = Outdoor Sensor
- S5 = Mixed 1 System Pump
- S6 = DHW Sensor
- S7 = Stab Sensor
- S8 = Snow & Ice Detector
- A1 = Aquastat
- B1 = Boiler
- P1 = Mixed 1 System Pump
- P2 = Mixed 2 System Pump
- P3 = Boiler Pump
- P4 = Variable Speed Injection Pump 1
- P5 = Variable Speed Injection Pump 2
- P6 = DHW Pump
- P7 = Hs Temp Pump
- V1 = Floating Action Mixing Valve
- T = Thermostat or Heat Demand
- ZV = Zone Valve
- ZCM = Zone Control Module
- AV = Air Separator & Expansion Tank w/ fill
- HE = Heat Exchanger
- FP = Floating Action Mixing Valve
- TP = Tempering Valve
- PB = Pressure By-Pass Valve
- GV = Globe Valve
- FC = Flow Check Valve
- DR = Drain Valve

<b>NOTE:</b> This drawing is considered only, not an engineered drawing. It is the responsibility of the system designer to determine the necessary components for and configuration of the particular system designed, including additional equipment, material usage for loads greater than the controls specified, and to verify that the controls are compatible with the system. The manufacturer is not responsible for the design of the system, including the selection of the controls, for the purpose of liability. Mechanical components such as the boiler, low-voltage transformer, zone valves and pump selection, is the responsibility of the installing contractor. Load codes and trade practices must be followed.	<b>Symbols</b>	<b>Project:</b> Uponor, Inc. 5925 148th Street West Apple Valley, MN 55124 Phone: (800) 321-4739 Fax: (952) 891-1409 www.uponor-usa.com
	<b>Flowing Action Mixing Valve</b>	<b>Drawn by:</b>
	<b>Tempering Valve</b>	<b>Checked by:</b>
	<b>Pressure By-Pass Valve</b>	<b>DATE:</b>
	<b>Globe Valve</b>	<b>Rep:</b>
	<b>Zone Valve</b>	
	<b>Flow Check Valve</b>	
	<b>Drain Valve</b>	



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- S4 = Outdoor Sensor
- S5 = Mixed 1 System Pump
- S6 = Mixed Return Sensor
- S7 = DHW Sensor
- S8 = Snow & Ice Detector
- A1 = Aquastat
- B1 = Boiler
- P1 = Mixed 1 System Pump
- P2 = Mixed 2 System Pump
- P3 = Boiler Pump
- P4 = Variable Speed Injection Pump 1
- P5 = Variable Speed Injection Pump 2
- P6 = DHW Pump
- P7 = Hi-Temp Pump
- V1 = Floating Action Mixing Valve
- T = Thermostat or Heat Demand
- = 120 V (AC)
- = Sensor Wire
- = 24 V (AC)
- = T-stat Wire
- = Misc.

Symbol	Description
	Air Separator & Expansion Tank w/ fill
	Pump
	Zone Valve
	Ball Valve
	Flow Check
	Floating Action Mixing Valve
	Tempering Valve
	Pressure By-Pass Valve
	Globe Valve
	Drain Valve

**NOTE:** This drawing is conceptual only, not an engineered drawing. It is up to the system designer to determine the necessary components for and configuration of the particular system designed, including additional piping, valves, and any safety devices which in the judgement of the designer are appropriate. Certain components may have been left out on this drawing for the purpose of clarity. Mechanical considerations such as, but not limited to, pipe sizing and pump selection, is the responsibility of the installing contractor. Local codes with their particular rules shall be followed.

**Project:**

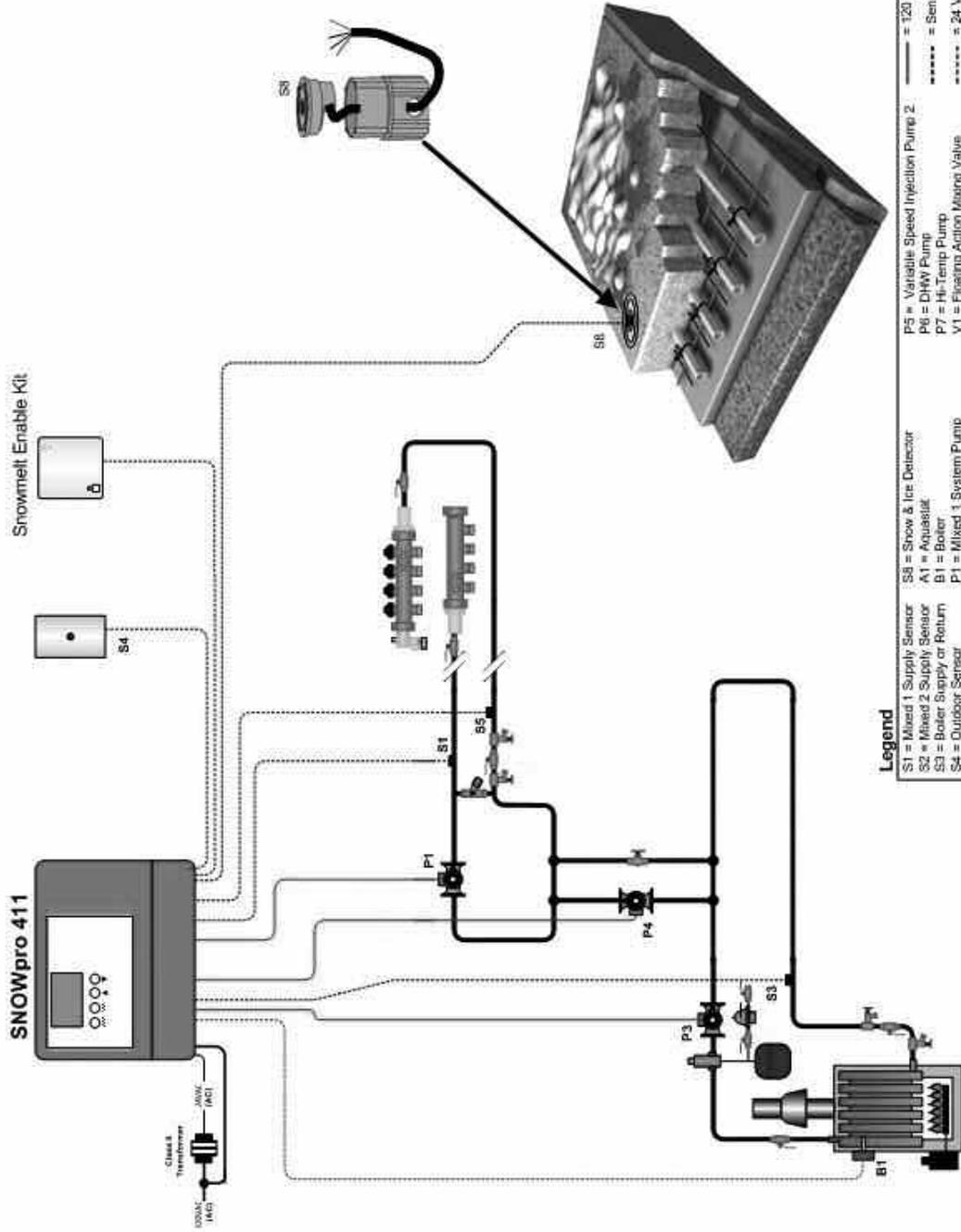
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**Drawn by:**

Rep:

**Checked by:**

DATE:



Legend

- S1 = Mixed 1 Supply Sensor
- S2 = Mixed 2 Supply Sensor
- S3 = Boiler Supply or Return
- S4 = Outdoor Sensor
- S5 = Mixed Return Sensor
- S6 = DHW Sensor
- S7 = Bath Sensor
- S8 = Snow & Ice Detector
- A1 = Aquastat
- B1 = Boiler
- P1 = Mixed 1 System Pump
- P2 = Mixed 2 System Pump
- P3 = Boiler Pump
- P4 = Variable Speed Injection Pump 1
- P5 = Variable Speed Injection Pump 2
- P6 = DHW Pump
- P7 = Hi-Temp Pump
- V1 = Floating Action Mixing Valve
- T = Thermostat or Heat Demand

Symbols	Tempering Valve	Pressure By-Pass Valve	Globe Valve	Drain Valve	Flow Check
<p>NOTE: This drawing is integral only, not an engineered drawing. It is up to the system designer to determine the necessary components for and configuration of the particular system design, including additional piping, controls, and any other devices which are a requirement of the design and application. Certain components may have been left out of the drawing for the purpose of clarity. Mechanical considerations such as air sealing, flow control, pipe sizing and pump selection, is the responsibility of the installing contractor. Load data and static pressure must be followed.</p>	<p>Flushing Action Mixing Valve</p>	<p>Zone Valve</p>	<p>Ball Valve</p>	<p>Ball Valve</p>	<p>Project: Uponor, Inc. 5925 148th Street West Apple Valley, MN 55124 Phone: (800) 321-4739 Fax: (952) 893-1409 www.uponor-usa.com</p>
					<p>Drawn by: _____</p> <p>Checked by: _____</p> <p>DATE: _____</p>

Indicator Light	Description
<b>Flashing Green</b>	Indicates the snow and ice melting system is currently coming up to its desired snow-melting temperature.
<b>Solid Green</b>	Indicates the snow and ice melting system is currently operating at its desired snow-melting temperature.
<b>Solid Red</b>	Displays for five seconds after the module button is pushed to stop snow-melting operation.  <b>Note:</b> If the snow and ice melting system is stopped while there is still an external demand for snow melting, the solid red indicator light displays until the external demand is removed.
<b>Flashing Red</b>	Indicates the snow and ice melting control is currently displaying an error message. Refer to the proMIX 212, SYSTEM pro311 or SNOW pro 411 installation manuals for an explanation of the error message and steps to follow for troubleshooting the error.

Table 1: Indicator Light Descriptions

## Technical Data

<b>Literature</b>	Snow Melt Enable Kit Instruction Sheet
<b>Packaged Weight</b>	0.22 lb. (100g), Enclosure G, white PVC plastic
<b>Dimensions</b>	2 $\frac{7}{8}$ " H x 2 $\frac{7}{8}$ " W x 1 $\frac{3}{16}$ " D (73 x 73 x 21mm)
<b>Approvals</b>	CSA NRTL/C, meets DOC and FCC regulations for EMI/RFI
<b>Ambient Conditions</b>	Indoor use only, 32 to 122°F (0 to 50°C), < 90% RH non-condensing
<b>Power Supply</b>	Uponor control; tN2 and Com terminals

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