

**HEATIZON**  
S Y S T E M S

## **RADIANT HEATING SYSTEMS**

- **SNOW MELTING**
- FLOOR WARMING
- SPACE HEATING
- ROOF DEICING
- GUTTER DEICING



# **SnowMeltz**

## **Installation & Operating Manual**

## **Warranty Registration**

**Heatizon Systems is glad to offer product phone support for the SnowMeltz® product. It is VERY important to have read this manual first. Please have your resistance test numbers and system model name/number available BEFORE calling for technical support.**

The SnowMeltz® Heating Cable comes in pre-established lengths that have been designed to deliver a specified heat density. Therefore, it is essential that all of the SnowMeltz® Heating Element contained in the kit be installed. ***Do not cut or alter the heating cable in any way.***

In order to minimize the risk of damage to the SnowMeltz® Heating Cable, Heatizon Systems recommends that the SnowMeltz® Cable be installed immediately prior to the installation of the cementitious material that it is embedded in.

Never cross the SnowMeltz® Heating Cable over itself or any other conductor or wire and always embed the heating cable and connection to cold leads.

When installing Heatizon Systems products, strict compliance with the National Electrical Code, Canadian Electrical Code, Local Building Codes, and Heatizon's Installation Manual is essential.

It is highly recommend to take photographs to document the installed SnowMeltz® for future reference before completing installation.



# SnowMeltz

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## Concrete Suggestions



Heatizon Systems is not an asphalt, concrete or pavers expert, but we have a few suggestions that you may wish to discuss with your contractor. We make these suggestions in an effort to increase the likelihood that Heatizon Systems' SnowMeltz® will be surrounded by products that are equal to it in both quality and expected longevity. In addition, we make these suggestions in an effort to reduce the possibility that your SnowMeltz® heating element will get damaged or broken by the vertical or horizontal movement of asphalt, concrete, or pavers.

**Dry Base:** Make certain that the ground below where the new asphalt, concrete or pavers will be located is as dry as possible. It is recommended that it be covered whenever there is a risk of a storm for one to two weeks prior to the pour.

**Excavation:** Be sure that your excavation is deep enough to accommodate the thickness of the concrete, the thickness of the insulation, the depth of the aggregate base you will have below the concrete and a 1" sand bed if you elect to install the SnowMeltz® below the concrete.

**Compaction:** Once the excavation is complete, it is highly recommended that a great deal of care be given to completely and properly compact the entire area where the asphalt, concrete or pavers will be located.

**Drainage:** In order to have proper drainage and to reduce the likelihood of vertical shifting of your asphalt, concrete, or pavers Heatizon Systems recommends that a minimum of 6 inches of high quality aggregate be laid over the entire area where the asphalt, concrete, or pavers are to be installed, plus one foot around all edges.

**Reinforcement:** In order to enhance the integrity of your asphalt, concrete or pavers, Heatizon Systems recommends that reinforcement be considered. Most of the time concrete can be reinforced with number 4 gauge welded wire fabric or ½ inch re-bar placed at least 2 inches from the top and bottom surfaces of the concrete.

**Insulation:** Insulation is a two edged sword. On the one hand, it acts as a good moisture barrier, reduces the response time of your snow melt or heating system, and saves money by reducing operating time. On the other hand, insulation does not allow the heat from the ground to get into the asphalt, concrete, or pavers.

**Maximum Area:** Heatizon Systems recommends that concrete be poured in square sections no larger than 9.5 feet X 9.5 feet. Pouring other geometric shapes without additional joints almost always results in cracking. Each square must always have a joint on each of its four sides.

**Thickness:** Heatizon Systems always recommends the following thickness be observed:

Concrete	5 or more inches
Asphalt	4 or more inches
Pavers	4 or less inches

**Suggested Mix:** Heatizon Systems recommends that a six-bag mix with fiber or steel fibers always be used when pouring concrete.



## Important Safeguards and Warnings

### ***WARNING: Shock and fire hazard***

- If the SnowMeltz® System is damaged or not installed properly, fire or shock could occur resulting in serious personal injuries or damage to property. Carefully follow the warnings and instructions contained in this manual.
- It is important that this equipment is installed only by qualified persons who are familiar with the proper sizing, installation, construction and operation of snow melting systems and the hazards involved.
- The installation must comply with all national and local electrical codes. Consult the authority having jurisdiction familiar with these requirements, either the NEC (National Electric Code), CEC (Canadian Electric Code) should there be any questions.
- The SnowMeltz® System is designed for Concrete, Asphalt, and Sand (paver) exterior heating purposes only. Be sure that the surface will be completed in such a way to not cause mechanical damage to this system in the future.
- If the SnowMeltz® System is damaged, it must be replaced or repaired. To repair or splice any part of the system, use only Heatizon SnowMeltz® Repair Kit (part number SMRPKIT).

## **1. General Guidelines**

### **1.1 Use of the Manual**

This manual describes the SnowMeltz® heating system — how to design the space, select the product, and install the system. It is important to thoroughly review this manual, ready or contactor panel instructions, and the Activator Installation and Operation Manual prior to installation:

For additional information regarding any aspect of the SnowMeltz® System, contact:

Heatizon Systems  
4137 South 500 West  
Murray, UT 84123 USA  
Tel: 888-239-1232  
Tel: 801-293-1232  
Fax: 801-293-3077  
info@heatizon.com  
heatizon.com

### **1.2 Safety Guidelines**

The safety and reliability of any snow melting system depends on proper design, installation, and testing. Incorrect installation or mishandling of the product can cause damage to the heating cable, system components and property, and can create a risk of fire or shock. The guidelines and instructions contained in this guide are important. Follow them carefully to minimize these risks and to ensure that the SnowMeltz® System performs as designed.

**Pay special attention to the following:**

• **Instructions Marked:**

**NOTE:**

• **Safety Warnings:**



# **DO NOT CUT THE HEATING CABLE!**



The SnowMeltz® Mat/Cable systems are engineered to achieve specific heat output for the square footage to which they are designed. Cutting the heating cable to fit a space is extremely dangerous and can result in a fire. Do not cut the heating cable to avoid an obstacle, use other methods as described in this manual. Make sure to avoid damaging/cutting the heating cable during/after the installation of the substrate by being aware of all heating cable locations.

Consult the TROUBLESHOOTING section of the installation manual in the event that the cable is damaged or cut by accident.



### 1.3 Remember to Measure Resistance

The resistance between the two conductor wires must be measured. Compare this resistance reading to the "Total Ohms" column in Product section 4.1 for SnowMeltz® Mats. The value should be within  $\pm 10\%$ . Also measure the resistance between each of the two conductors and the shielding/ground wire. Both should read infinity or open. If there are different than expected readings for any of these measurements are observed, contact Heatizon Systems at 888-239-1232. Please refer to Section 5 (Required Tests) for instructions on how to measure the resistance.

#### NOTE:

#### **Important: measure the resistance four times during the installation process**

Remember to always measure, verify and record the actual resistance throughout the installation process (out of the box, after installation, after covering with substrate material, and prior to connecting the activator/panel).

### 1.4 Limited Warranty

For a period of ten (10) years and while in possession of the original owner, Heatizon warrants that the SnowMeltz® heating cable is free from defects in material, design and workmanship. The warranty is only valid if the warranty certificate has been properly completed, and the installation is in accordance with the installation instructions.

## 2. SnowMeltz® System

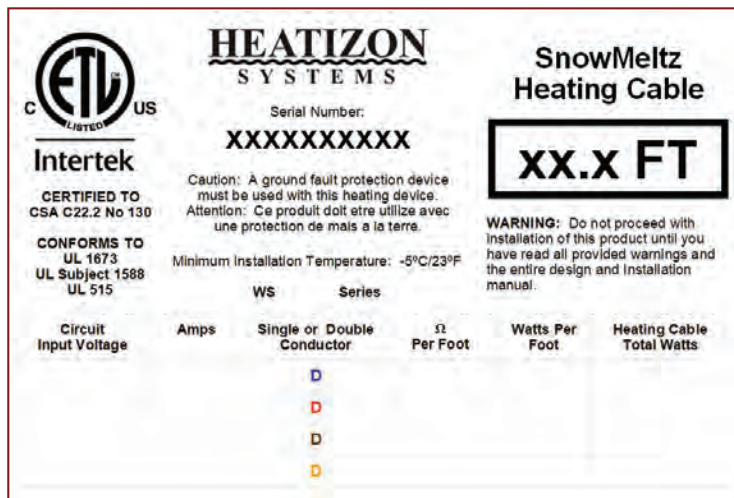
### 2.1 SnowMeltz® Specifications & Electrical Connections

	MATS
<b>Cable Construction</b>	Twin Conductor
<b>Rated Voltage</b>	120VAC to 277VAC
<b>Output</b>	12 watts/ft max.
<b>Length</b>	Refer to Individual Product Labels
<b>Cable Diameter</b>	0.24" to 0.35"
<b>Cable Type</b>	Constant Wattage
<b>Conductor Insulation</b>	Fluoropolymer
<b>Outer Insulation</b>	Cross-Linked XLPE
<b>Protective Screen</b>	Tinned Copper
<b>Outer Jacket</b>	Cross-Linked Halogen Free Fire Retardant Polyolefin with UV Protection
<b>Heating Endurance</b>	-22°F(-30°C) to 194°F(90°C)
<b>Short Term Heating Endurance for Asphalt</b>	464°F(240°C) not to exceed 30 minutes
<b>Minimum Spacing</b>	2"
<b>Standard Spacing</b>	3" to 6"
<b>Cap Thickness</b>	2" to 4" max
<b>Bending Radius</b>	6D** (approx. 2")
<b>Thermal Resistance</b>	464°F(240°C) Do not to exceed 30 minutes

120V and 277V Connection	
<b>PHASE</b>	Copper Element (Cold Lead)
<b>NEUTRAL</b>	Copper Element (Cold Lead)
<b>GROUND</b>	Shield Braid (Cold Lead)

208V, 240V and 480V Connection	
<b>PHASE</b>	Copper Element (Cold Lead)
<b>NEUTRAL</b>	Copper Element (Cold Lead)
<b>GROUND</b>	Shield Braid (Cold Lead)

## 2.2 Product Labeling



### SnowMeltz® Labels on mat include the following information:

- Listing information
- Serial number
- Size of mat
- Allowable voltages for product
- Amps at selected voltage
- Ohms of cable
- Total Watts generated
- Number of conductors
- Watts per foot (at voltage)

## 2.3 Pre-Installation Notes

### NOTE:

- It is important that heating cable be installed only by qualified persons who are familiar with the proper sizing, installation, construction and operation of snow melting systems and the hazards involved. Heating cable products are designed for in and under concrete, asphalt, and paver snow melt applications.
- Article 426 of the NEC requires ground fault protection for line voltage equipment embedded in a noncombustible medium. Check local building codes and regulations for ground fault protection device (i.e. GFCI, GFEP, etc. ) requirements when installing all heating cable products.
- Do not bend heating cable within 3" of a termination or connection between the heating element and the cold lead. Heating cables cannot cross or touch one another.
- Article 426 of the NEC limits embedded deicing and snow melting equipment to a maximum of 1300 watts/m<sup>2</sup> (120 watts/ft<sup>2</sup>) of heated area.
- Store the heating cable in a dry place up to the endurance temperature of the jacket 194°F (90°C).
- Minimum installation temperature is 23°F (-5°C).
- Read the instructions carefully before installing SnowMeltz® system.
- Remember to measure the resistance four times.
- The heating cable cannot be cut to length, crossed over itself, or installed too close to itself.
- Remember to check that the supply voltage matches the voltage of the SnowMeltz® system.
- Remember to place the labels as written in this instruction.
- Only for outdoor installation, not for roofs.

Please consult Heatizon Systems for any other questions. 1-888-239-1232





### 3. SnowMeltz® Installation Design

#### 3.1 Gathering Site Information

- Size and layout of area - Be sure to properly measure the area to be installed to ensure the proper sized SnowMeltz® system has been purchased. Also plan how power will be run to the area and/or connected to the cold lead(s).
- Geographic Location - Depending on the geographic location of the installation area, some adjustments may have to be made during the installation, such as: layout configuration, drainage, heat output, obstacles, etc.
- Cover or cap material and thickness (1.5" minimum) - SnowMeltz® MUST be embedded in either concrete, asphalt, or sand underneath pavers, ensure the system is at least 1.5 inches from surface.

#### 3.2 Determine the Voltage and Amperage

The available supply voltages include 208V, 240V, and 277V. Ensure based on the voltage and size of system(s) being used, that the circuits have been sized properly.

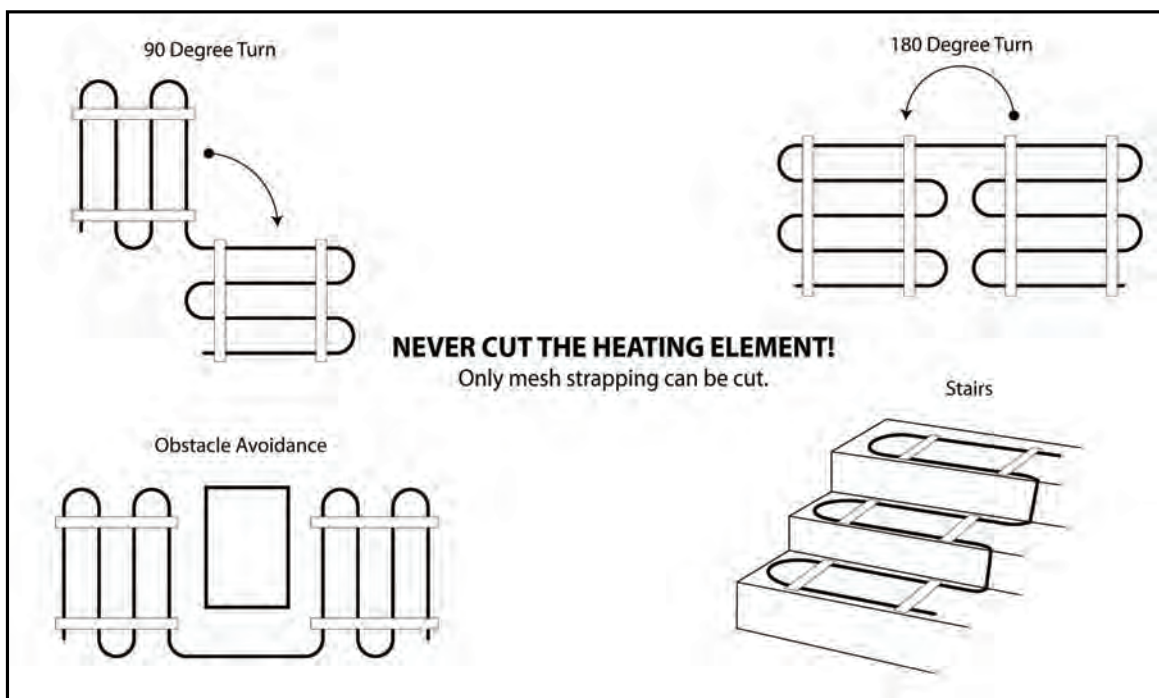
Breaker Size (Amps)	Max Load (Amps)
50	40
40	32
30	24
20	16
15	12



**Important: Operating SnowMeltz® at improper design voltages will damage the system and void the warranty.**

#### 3.3 Plan the design\*

Determine the optimum SnowMeltz® Mat layout for the heated area to ensure coverage. Determine where the cold lead (20 foot) will join to a junction box, panel, or activation device. When installing multiple systems, be sure to plan layout for multiple cold leads being run to the same location. Use included grid (back of the manual) to layout the SnowMeltz® system(s).



**NOTE:**

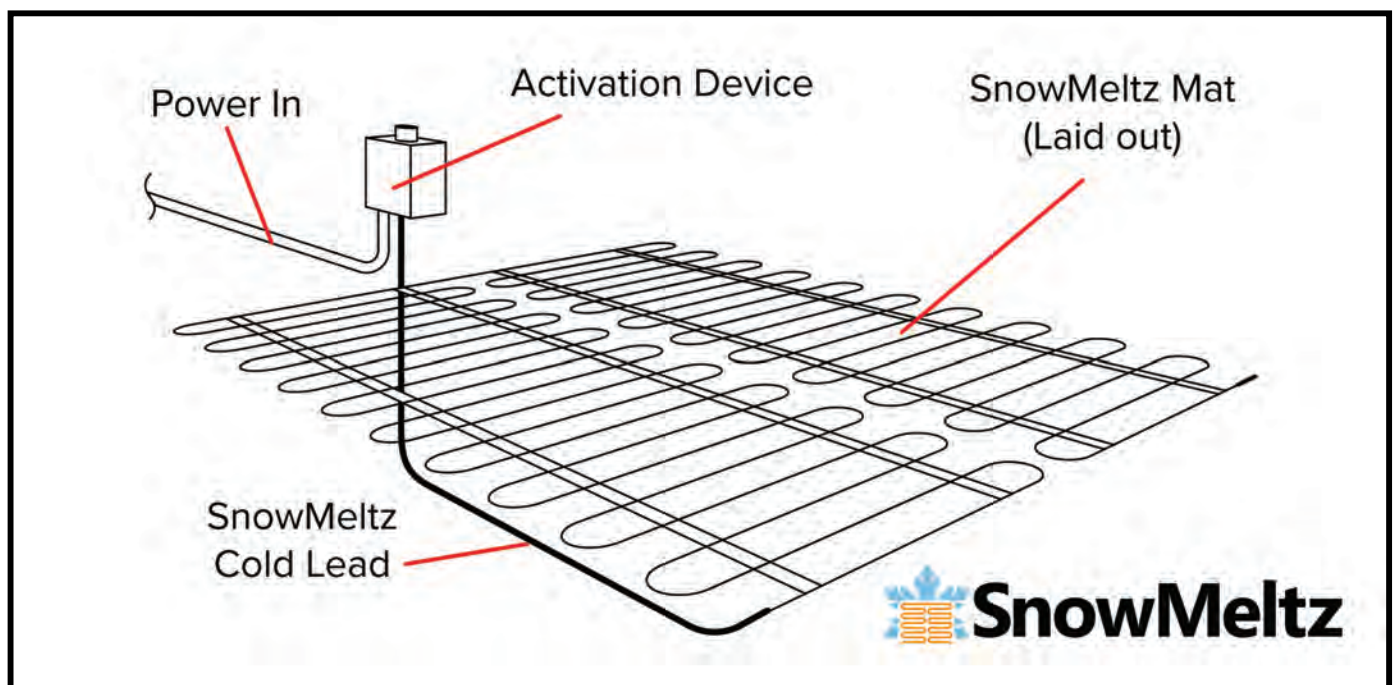
- Make certain to plan for the movement of water created by melted snow.
- The transition joint between the heating element and the cold lead must be embedded in asphalt, concrete, sand, stone dust, or cementitious material. Do not bend the heating cable within 3" of cold connection.
- Activation Devices are the eyes and ears of the heating system. Location is important. Please reference installation and operation information in the activation device product literature. Some activation devices may or may not require a different voltage than the heating cable.



### 3.4 Single Mat Configurations

If using a single SnowMeltz mat, the Cold Lead will be ran back to either activation device, or a contactor/relay panel. In the case of a exterior activation device, ensure the activation device is located where the cold lead can reach back to that device for wiring, or provide a junction box.

For instances where the SnowMeltz cold lead is unable to reach to the activation device, or to the location of a contactor/relay panel, an appropriate junction box should be used. Consult local code for gauge of cable to be used and type of junction box for the location (exterior/interior, etc.)



### 3.5 Multiple Mat Configurations

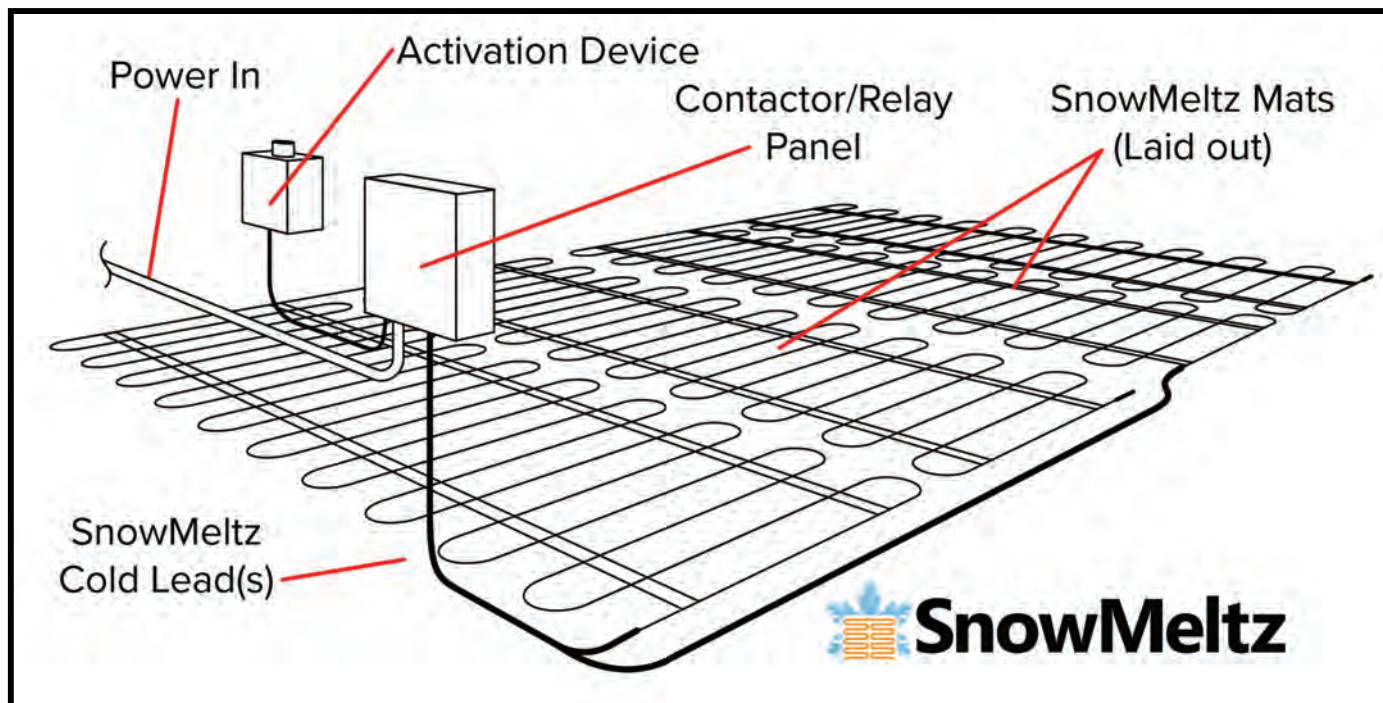
If using a multiple SnowMeltz mats, the Cold Leads will be ran back to either activation device, or a contactor/relay panel. In the case of a exterior activation device, ensure the activation device is located where the cold leads can reach back to that device for wiring.

For instances where multiple mats are less than 30 total amps (combined), then the M326A/ M326ARS can be used to switch the load of the connected SnowMeltz mats. Using an appropriate sized circuit breaker, follow all local codes for providing power to an outdoor-rated junction box below the activation device.

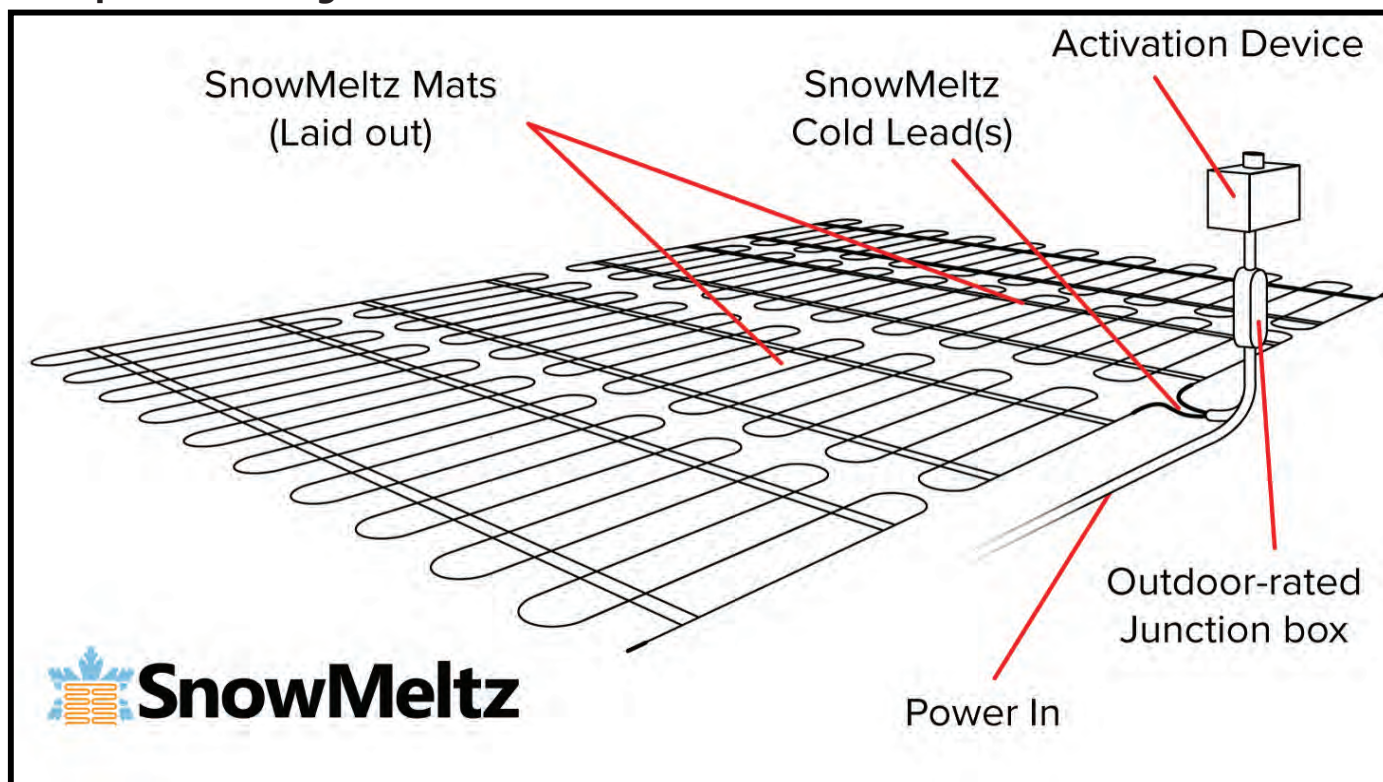


## Multiple Mat Configurations - Panel

When using a contactor or relay panel and multiple mats, ensure that an outdoor-rated junction box is used to connect the SnowMeltz mats to power from the contactor/relay box.



## Multiple Mat Configurations - No Panel

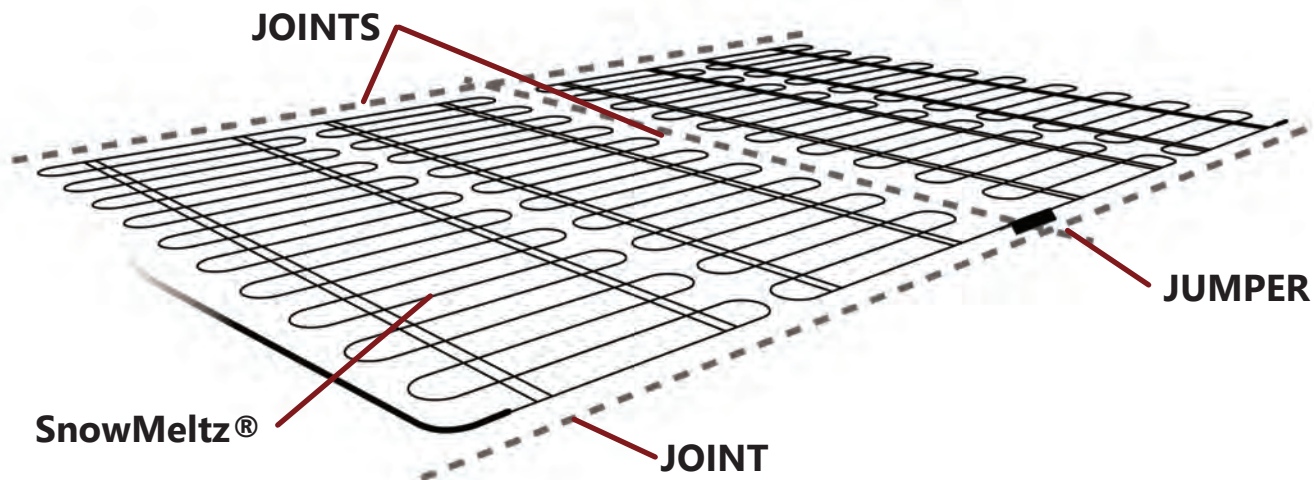




### 3.6 Jumpers

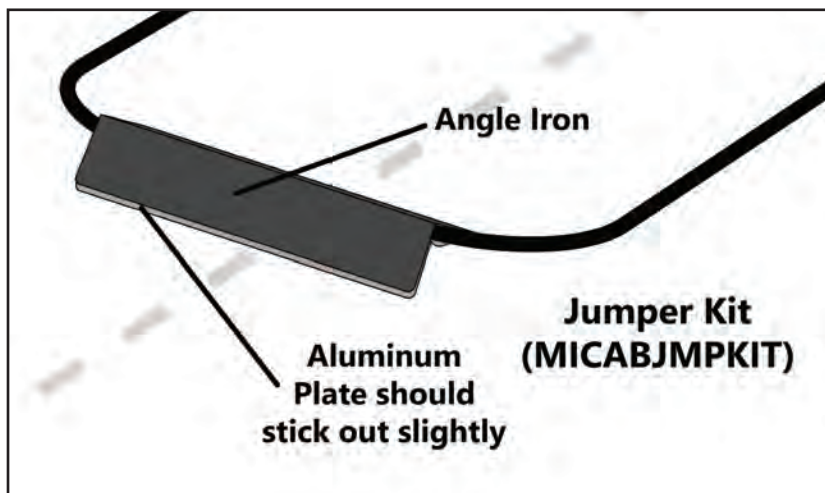
ASHRAE and Heatizon always require the use of jumpers through joints. Never extend the heating cable through any joint in asphalt and/or concrete without a jumper. Determine the number of joints in order to determine the number of Jumper Kits required for the project. Always jumper through all joints using the appropriate jumper kit provided by Heatizon Systems.

When laying out SnowMeltz® in concrete where jumpers will need to be used, best practice is to minimize the number of times the heating element will cross any joint. Ideally, arrange the layout so that the mat fills one section of the concrete (between joints) then crosses the joint(s). The best solution for jumpers is to use the jumper Kit supplied by Heatizon (Heatizon Part #MICABJMPKIT), it includes components for four jumpers.



#### CONCRETE JOINTS AND USING JUMPERS

- **Control Joints:** Control Joints are intended to control where the slab will crack and are placed either in fresh concrete or saw cut in after the concrete is poured. Spacing of these joints will vary depending on the size and shape of the slab. Use the Cable Jumper to protect the heating cable when crossing control joints.
- **Construction Joints:** Construction joints are a common result when multiple concrete pours are completed at different stages during construction. Use a Cable Jumper to protect the heating cable when crossing construction joints.
- **Expansion Joints:** Expansion or Isolation joints result when concrete is isolated from something else which can be concrete, a wall, column etc. When an expansion joint is used between two concrete slabs the two structures are not connected using rebar, therefore movement can/will occur between them. Do not cross expansion joints with the heating portion of the cable. The cold lead portion of the cable may cross expansion joints as long as the cold lead is under or sleeved with conduit at the bottom of the joint.





## 4. Product Selection

Since SnowMeltz CANNOT be shortened, it is vital to choose the correct size system before installing. It is advisable to always get a smaller system for the area, for example: if the area is 48 square feet, choose a 40 or 45 square foot system, to account for spacing between mats and slab perimeter.

### SnowMeltz® Mat, 50 Watts/Ft2 @ 208 VAC

Heatizon Part Number	Total Watts	Total Ohms	Amps @ 208V	Watts/Sqft 208V	Watts/Ft	Coverage Area/Square Foot	Watts/Square Foot	Mat Length	Mat Width	Cold Lead Length/AWG
SM-50W208-10	520	<b>120.0</b>	1.0	50	12	10	50	6.1'	24"	20'/14
SM-50W208-15	825	<b>80.0</b>	1.5			15		9.1'		20'/14
SM-50W208-25	1235	<b>60.0</b>	2.0			20		12.2'		20'/14
SM-50W208-35	1745	<b>48.0</b>	2.5			25		15.2'		20'/14
SM-50W208-45	2245	<b>40.0</b>	3.0			30		18.3		20'/14
SM-50W208-60	2995	<b>34.3</b>	3.5			35		21.3		20'/14
SM-50W208-75	3680	<b>11.8</b>	4.0			40		24.4		20'/10
SM-50W208-100	4740	<b>9.1</b>	5.0			50		30.5		20'/10

### SnowMeltz® Mat Models - 50 Watts/Ft2 @ 240VAC or 37 Watts/Ft2 @208VAC

Heatizon Part Number	Total Watts	Total Ohms	Amps @ 240V	Watts/Sqft 240V	Watts/Ft	Amps @ 208V	Watts/Sqft 208V	Coverage Area/Square Foot	Mat Length	Mat Width	Cold Lead Length/AWG
SM-50W240-37W208-15	775	<b>120.0</b>	3.2	50	12	2.8	37	15	8'	24"	20'/14
SM-50W240-37W208-20	950	<b>80.0</b>	4.0			3.4		20	10'		20'/14
SM-50W240-37W208-30	1425	<b>60.0</b>	5.9			5.1		30	15'		20'/14
SM-50W240-37W208-35	1840	<b>48.0</b>	7.7			6.6		35	18'		20'/14
SM-50W240-37W208-45	2215	<b>40.0</b>	9.2			8.0		45	22'		20'/14
SM-50W240-37W208-60	3015	<b>34.3</b>	12.6			10.9		60	30'		20'/14
SM-50W240-37W208-75	3660	<b>30.0</b>	15.3			13.2		75	37'		20'/10
SM-50W240-37W208-110	5500	<b>9.1</b>	22.9			19.9		110	55'		20'/10

### SnowMeltz® Mat Models - 50 Watts/Ft2 @ 277VAC or 37 Watts/Ft2 @240VAC

Heatizon Part Number	Total Watts	Total Ohms	Amps @ 277V	Watts/Sqft 277V	Watts/Ft	Amps @ 240V	Watts/Sqft 240V	Coverage Area/Square Foot	Mat Length	Mat Width	Cold Lead Length/AWG
SM-50W277-37W240-10	426	<b>180.1</b>	1.5	50	12	1	37	10	4'	24"	20'/14
SM-50W277-37W240-15	712	<b>107.8</b>	2.6			2		15	7'		20'/14
SM-50W277-37W240-20	1100	<b>69.8</b>	4.0			3		20	10'		20'/14
SM-50W277-37W240-25	1250	<b>61.4</b>	4.5			4		25	13'		20'/14
SM-50W277-37W240-35	1650	<b>46.5</b>	6.0			5		35	17'		20'/14
SM-50W277-37W240-40	2050	<b>37.4</b>	7.4			6		40	21'		20'/14
SM-50W277-37W240-45	2250	<b>34.1</b>	8.1			7		45	23'		20'/14
SM-50W277-37W240-50	2500	<b>30.7</b>	9.0			8		50	25'		20'/14
SM-50W277-37W240-60	2995	<b>25.6</b>	10.8			9		60	30'		20'/14
SM-50W277-37W240-75	3610	<b>21.3</b>	13.0			11		75	37'		20'/14
SM-50W277-37W240-85	4210	<b>18.2</b>	15.2			13		85	43'		20'/10
SM-50W277-37W240-100	4900	<b>15.7</b>	17.7			15		100	50'		20'/10
SM-50W277-37W240-130	6350	<b>12.1</b>	22.9			20		130	65'		20'/10

## 4. Product Selection (continued)

SnowMeltz Kits available through various online retailers and distributors are available in several sizes, but are also available in larger sizes by combining two mats for a maximum size of 185 square feet. These kits are controlled and activated by a single M326A activation device, switching a maximum of 30 full load amps.

### SnowMeltz® Kit Models - 37 Watts/Ft2 @240VAC

Heatizon Part Number	Total Watts	Watts/Ft	Amps @ 240V	Watts/ Sqft 240V	Coverage Area/Square Foot	Mat Lengths	Mat Width	Cold Lead Lengths/ AWG
SM-37W240-135-KIT	4995	12	21	37	135	37'/30'	24"	20'/14
SM-37W240-145-KIT	5365		22.4		145	43'/30'		20'/14
SM-37W240-150-KIT	5550		23.1		150	37'/37'		20'/14
SM-37W240-160-KIT	5920		24.7		160	43'/37'		20'/14
SM-37W240-170-KIT	6290		26.2		170	43'/43'		20'/14
SM-37W240-185-KIT	6845		28.5		185	50'/43'		20'/14

SnowMeltz Kits come standard with the SnowMeltz mat(s), M326A activation device and the appropriate number of joint jumpers (MICABJMPKIT). The kits are designed to use either a 30 or 40 amp circuit and do not require a relay/contacter panel. Follow all local codes wiring/ installation of the SnowMeltz Kits.

## 5. Required Tests (First)

### Insulation Resistance with Megohmmeter

Before, during, and after installation, it is necessary to measure the insulation resistance between the heating conductor and the protective grounding screen with a 500VDC Megohmmeter. This measured value may not be less than **0.5 Megohm**. Connect the voltage lead to both of the inner cold lead conductors and the earth lead to the cold lead outer grounding braid. Test resistance at 500VDC. Record the measured values in the certificate of warranty.

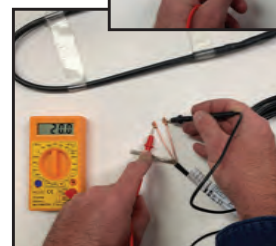


### Cable Conductor Resistance with Multimeter

Before, during, and after installation, it is necessary to measure the resistance of the heating circuit with a multimeter. The measured values should be equal -5% to +10%.

Connect one meter lead to the one cold lead inner conductor and the other meter lead to the other cold lead inner conductor. Take the Ohm reading. Record the measured values in the certificate of warranty.

Be sure to check product label for proper resistance, operating amperage, operating voltage, cable length and other important information when performing tests.





## 6. Area Preparation

Ensure that the substrate has been properly compacted and drainage has been satisfactorily addressed. For substrate preparation and concrete recommendations please refer to page 1 of this manual for "A FEW CONCRETE SUGGESTIONS". Other site preparation recommendations include, cleaning up the site to eliminate objects that may damage the heating element prior to, during and after the installation.

Use the site sketch to transfer the following information to the site.

- Identify and mark the location of any and all joints if the heating cable or mat will be installed into a new asphalt or a concrete slab, Do not forget to use jumpers for any and all joints.
- Determine the location of the starting points of the heating element and the exit points for the cold leads. Connections must be embedded in asphalt, concrete, or other cementitious material.
- Determine the location of the activation device. If using an in-slab temperature or temperature/moisture sensor, mark the location for the activation device and install a conduit sleeve for the lead wire to the in-slab sensor. An automated activator is the "eyes and ears" of the snow melt system. It is important that it be installed in a location that will allow it to turn the snow melt system "on" when it is needed and "off" when it is not needed. Verify the proper location has been selected for the activation device. Manual activators require human action—as a result they should be placed in a location that is convenient and easily accessible.

## 7. Installation

**Concrete Preparation:** Loose heating cable not in a mat may be secured in place by landscape stakes and plastic wire ties, welded wire fabric and plastic wire ties or tape, or pre-punched steel straps purchased from your Heatizon Distributor or Representative. Do not compress or strain the cable, run heavy machinery, equipment, or vehicles over it. Be careful to avoid stepping on the cold section factory connection of the cable. Consult the NEC or CEC for grounding requirements of rebar or welded wire fabric for concrete installations. When working with concrete or asphalt joints, design the layout so each section of the slab is covered and the cable crossing of joints are minimized. Mats should be installed in evenly spaced runs per the system design and plan. Sleeve hand rail posts to avoid drilling or penetrations in the slab after the pour.

- **Two Pour Concrete:** In this installation a concrete slab is already present and an additional slab will be poured on top. The heating cable can be laid out using welded wire fabric and zip ties or tape, or pre punched steel strapping for loose cable installations not in a mat form. Cold leads should be sleeved for this installation following conductor fill and size requirements in the NEC and CEC. The heating cable portion and cold connection can not pass into the conduit sleeve. Jumpers must be used to protect the heating cable where joints are present on the concrete slab below as well as in the new slab.
- **Single Pour Concrete:** In this installation the aggregate or concrete base is prepared first. Once the base is prepared the installer can begin by placing a grid of welded wire fabric or rebar in preparation for the heating cable. The heating cables or mats can be attached to the welded wire fabric with plastic zip ties or tape. Jumpers must be used for any and all joint cable crossings. Do not cross expansion joints. Once the heating cable is installed, place chairs or concrete dobies under the rebar or welded wire fabric grid to bring the heating cable within 2" to 3" of the surface. Cold leads can be sleeved following conductor and fill size requirements in the NEC and CEC. The heating cable portion and cold connection can not pass into any conduit sleeve.

**Asphalt Preparation:** Loose heating cable not in mat form may be secured in place by landscape stakes



and plastic wire ties, welded wire fabric and plastic wire ties or tape, or pre-punched steel straps purchased from your Heatizon Distributor or Representative. Cables in a mat can be laid out in the configuration desired directly on the surface. Do not compress or strain the cable, run heavy machinery, equipment, or vehicles over it. Be careful to avoid stepping on the cold section factory connection of the cable. Consult the NEC or CEC for grounding requirements of rebar or welded wire fabric for asphalt installations. When working with concrete or asphalt joints, design the layout so each section of the slab is covered and the cable crossing of joints are minimized. Cables or mats should be installed in evenly spaced runs per the system design and plan. Sleeve hand rail posts to avoid drilling or penetrations in the slab after the pour.

- Two Pour Asphalt:** In this installation a binder or base coat of asphalt is laid down and an additional asphalt layer is placed on top of the heating cable. The base coat is to be rolled smooth in preparation of the heating cable installation. Welded wire mesh can be used to install loose cables in a grid. The grid can be secured to the base coat slab using stakes. If using a heating cable in mat form, the mats can be laid out on the base coat slab and secured down using the mesh portion of the mat and not the heating cable. Cold leads should be sleeved for this installation following conductor fill and size requirements in the NEC and CEC. The heating cable portion and cold connection can not pass into the conduit sleeve. Jumpers must be used to protect the heating cable where any and all joints are present. Do not cross expansion joints.
- Single Pour Asphalt:** In this installation the aggregate or base is prepared first. Once the base is prepared, a layer of sand or stone dust is placed over the base coat approximately 1" thick. The installer can begin by placing a grid of welded wire fabric or landscaping stakes in preparation for the heating cable. The heating cables or mats can be attached to the welded wire fabric, or landscaping stakes with plastic zip ties that will not melt. Jumpers must be used for any and all joint cable crossings. Cold leads should be sleeved following conductor and fill size requirements in the NEC and CEC. The heating cable portion and connection can not pass into any conduit sleeve.



**Sand Bed Paver Preparation:** The heating cable may be secured in place by landscape stakes and plastic wire ties, welded wire fabric and plastic wire ties or tape. Do not compress or strain the cable. Do not run heavy machinery, equipment, or vehicles over the cable. Be careful to avoid stepping on the cold section factory connection of the cable.

- Sand Bed Installation:** In this installation the aggregate or base is prepared first. Cover the base with 1/2" layer of compact sand. Use welded wire fabric or landscape stakes to place loose heating cables or lay the heating cable mat on the layer of sand in accordance with determined layout. Cover the heating cable or mat with another 1/2" layer of sand. The paver installer must be careful to not walk on the factory connection or damage the heating cable with shovels, rakes or other tools. Cold leads should be sleeved for this installation following conductor fill and size requirements in the NEC and CEC.

**Mortar Under Stone & Tile Preparation:** The heating cable may be secured in place with pre-punched





steel straps or anchor kits purchased from your Heatizon Distributor or Representative. Do not compress or strain the cable. Do not run heavy machinery, equipment, or vehicles over it. Be careful to avoid stepping on the cold section factory connection of the cable.

- **Mortar Bed Installation:** Anchor the heating cable in parallel runs in preparation for mortar placement. Cold leads should also be anchored for this installation back to the exit point of the slab and placed in conduit following conductor fill and size requirements in the NEC and CEC.

**Stairs:** When installing in stairs, ensure that the heating element should not be too close to the edge of the stair and still be completely embedded. Also be sure that where the cable spans the rise of the stairs get embedded in the substrate to avoid causing a hot spot, and damaging the cable. Avoid doing a full run on the rise of the stair.

- **Concrete Stair Installation:** The heating element must be 1.5 inches below and spaced 4" away from the edge of the stair. When the cable spans the rise, it too should be completely embedded. If using rebar, use the same methods to secure the cable to the rebar as described in the "Concrete" section. Use Jumpers when stairs will have joints between individual stairs, or into adjoining concrete that is to be heated.
- **Paver Stair Installation:** Be sure that the heating element is properly secured prior to mortaring, and be sure that all the heating element is properly embedded. The cable should not be strained or compressed. Allow the mortar to fully cure before walking on pavers.



**Cold Lead(s):** The cold lead(s) should be run in a conduit to either a junction box, panel, or activator and should NEVER cross or come in contact with the SnowMeltz® heating element.



## 8. Required Tests (Second)

### Insulation Resistance with Megohmmeter/Multimeter

Following the steps outlined in Section 5, perform the second set of megohmmeter and multimeter tests, ensure that the readings are still consistent with factory specifications and with the readings taken from the previous step.

## 9. Install Activation Device

Heatizon activation devices come with data sheets, wiring diagrams, and instructions. Install the selected activator by carefully following the specific set of instructions that were included with the activation device. Some systems are professionally designed and can include custom wiring diagrams from our industry professionals. There are three available types of activators that are suitable for SnowMeltz®:

- **MANUAL** - Manual activators usually consist of a timer switch that keeps the system on for a set amount of time, then powers off the system. This activator requires some sort of panel (regardless of the number of circuits) to switch the load.
- **AERIAL** - These activators are mounted on a wall or on a conduit in the air in very close proximity to the area to be heated. They can be equipped with temperature and/or moisture sensors, and usually have some form of basic manual override. Depending on the model, it may be able to switch smaller loads (30 amps) without the use of a panel. The sensor for this device must be able to detect the same circumstances that will be present in the area where the SnowMeltz® is installed.
- **REMOTE/IN-GROUND** - The activators usually have a head unit located indoors and have more functionality and have optional in-ground sensors that detect moisture/temperature on the concrete/asphalt. These units can also have separate remote temperature sensors. Normally these units require a panel to switch the load. When using in-ground sensors, the conduit for the sensor wire and head unit must NOT cross or come in contact with the heating element. The sensor must be mounted in the SAME substrate as the SnowMeltz® system is installed into. When using a remote temperature sensor, it should be located to receive the same conditions as the heated area.



It is imperative that any/all conduit being used (for sensors, cold leads, power, etc.) do NOT come in contact with the heating element. Consult the individual instructions for the appropriate activator for wiring/mounting. Quickstart/Wiring Diagrams for the most popular Heatizon activation devices are included on pages 20-23 .





#### NOTES:

- If the selected activation device requires conduit for a temperature sensor, the conduit must be centered between two runs of heating cable. Always run high voltage and low voltage conductors in separate conduits.
- Heatizon recommends that photographs of the installed heating cable be taken and/or hand drawings documenting the layout be completed prior to installing the final surface.

## 10. Surface Application

**For Concrete Applications:** Proceed with applying concrete. Ensure that the concrete covers the entire heating element and the connection between the heating cable and cold leads. Great care should be taken to not damage the heating cables by impacting, cutting or other abuse.

**For Asphalt Applications:** Heatizon Systems heating cable is of high quality and durable construction. As a result, it can tolerate the heat and compression of newly poured asphalt with some modification. The heating cables can tolerate 464°F(240°C) for 30 minutes. For single pour asphalt, cover the heating element with 1/2" of substrate material prior to installing asphalt per the directions below. For both single and two pour asphalt installations place a layer of asphalt at least 1/2 inch thick over the cables by hand, and roll with



a roller of approximately 1.5 ton size. This will protect the heating cables from damage by tools or paving equipment and will protect the cable from heat during placement of the main pour.

Continuously check the insulation resistance of the heating cables to verify that the cables are not damaged during placement of the asphalt. Continue with the main pour.

**For Paver Applications:** Proceed with the installation by covering the heating cable with a layer of sand or stone dust. Ensure that the sand or stone dust covers the entire heating element and the connection between the heating element and cold leads before the pavers are installed. Great care should be taken to not damage the heating cables by impacting, cutting or other abuse.



### **For Stone or Tile with Mortar Applications:**

Cover the heating cable with mortar to completely embed them and allow it to set. Allowing the first layer of mortar to set will protect the heating cables during the final installation and the setting bed for stone or tile. Install the Stone or Tile and keep note that the final cable depth of the cable from the surface should be 2". Great care should be taken to not damage the heating cables by impacting, cutting or other abuse.



## 11. Required Tests (Second)

### Insulation Resistance with Megohmmeter

Before, during, and after installation, it is necessary to measure the insulation resistance between the heating conductor and the protective grounding screen with a 500VDC Megohmmeter. This measured value may not be less than 0.5 Megohms.

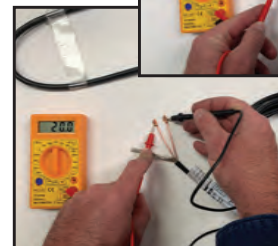
Connect the voltage lead to the inner cold lead conductors and the earth lead to the cold lead outer grounding braid or sheath. Test resistance at 500VDC. Record the measured values in the certificate of warranty.

### Cable Conductor Resistance with Multimeter

Before, during, and after installation, it is necessary to measure the resistance of the heating circuit with a multimeter. The measured values should be equal -5% to +10%.

Connect one meter lead to the one cold lead inner conductor and the other meter lead to the other cold lead inner conductor. Take the Ohm reading. Record the measured values in the certificate of warranty.

Be sure to check product label for proper resistance, operating amperage, operating voltage, cable length and other important information when performing tests.



## 12. Electrical Connections

The connection of the power supply and the activation device must be done by a qualified electrician in accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC). Refer to the wiring diagram included with the activation device and/or panel(s).

### Electrical Requirements:

120 or 277 VAC — Single Phase

208 or 240 VAC — Two Phase

The grounding shield from the Cold Lead(s) must be wired to Ground for all primary power installations. Section 426 of the NEC requires that each circuit to the heating cable be protected with a ground fault equipment protection devices.

#### NOTE:

Heatizon recommends that photographs of the installed heating cable be taken and/or hand drawings documenting the layout be completed prior to before installing the asphalt, concrete, pavers, stone or tile.



## 13. Activator Quickstart Guides

### 13.1.1 M432(ETO2) Activator/Controller

- Control Unit must be mounted inside or in a water-tight enclosure if mounted outside.
- Control Unit must be located within distance of sensor being used. Sensors can be extended using 6x14-16AWG wire up to 650 feet.
- Wiring/setup for this guide is using one (1) M433/M430 (ETOG) sensor. For other sensor(s) or other situations, please consult the complete user manual.
- Installation/Setup of the activator should be done AFTER completion of installing the SnowMeltz® system and the substrate is fully cured/completed.

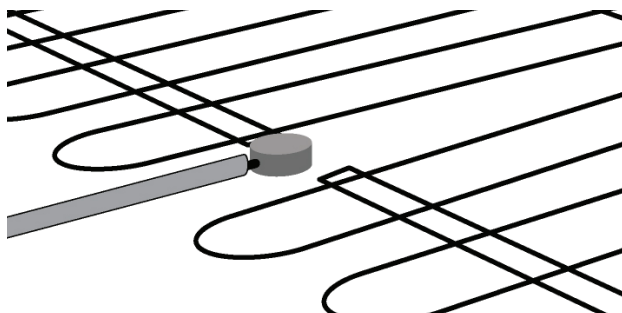


**M432(ETO2) With Cover Removed**



**The system must not be turned on until the concrete has fully cured. DO NOT USE SnowMeltz® TO CURE/DRY CONCRETE.**

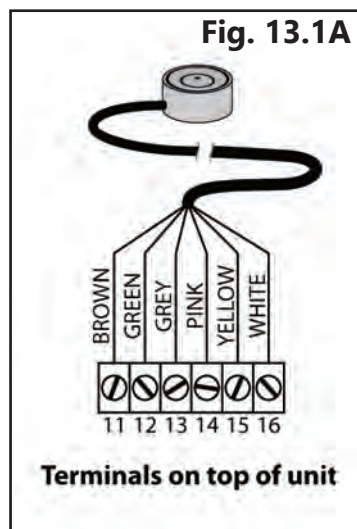
### 13.1.2 MOUNTING SENSOR HEAD



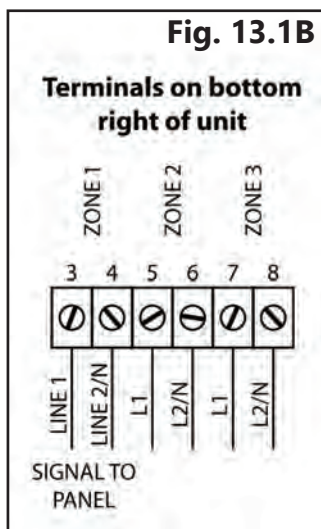
The following must be followed when mounting the in-ground sensor (M433/M430):

- Sensor must be located in the area as the SnowMeltz® system.
- Sensor head must be flush with the top of the asphalt/concrete.
- Space the SnowMeltz® mat slightly to accommodate the sensor head.
- Ensure that heating element does not touch or cross the sensor head, wire, or conduit.

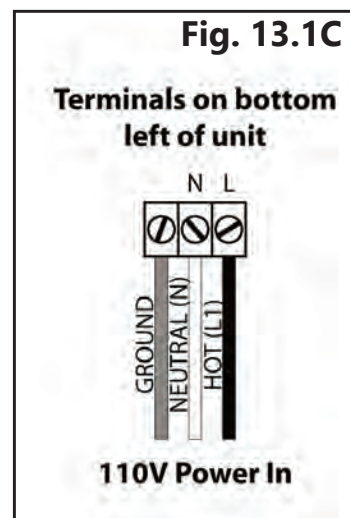
**Fig. 13.1A**



**Fig. 13.1B**



**Fig. 13.1C**





### 13.1.3 WIRING

1. Remove the cover with a small-blade flat head screwdriver by pressing the two slots on the front-center of the cover.
2. Mount the unit using the four screw holes on each corner of the unit. Be sure that the mounting location has taken into account:
  - Incoming Power
  - Proximity to sensor(s) (Extra wiring may be necessary to extend sensor)
  - Proximity to panel and/or heating element
3. Wire sensor according to diagram in 13.1A.
4. Wire connection to panel/heating element using the instructions from the panel and the diagram 13.1B.
5. Wire incoming power (110V 15A) following diagram 13.1C.



**Once powering on the unit, if the ALARM light blinks at any point during or after setup, check signal and sensor wiring connections.**

6. Power on the unit and do an initial setup of the software: (using the dial to move the selection up or down and pressing down on the dial to make the selection/ENTER)
  - Choose Celsius or Fahrenheit (ENTER)
  - Select ETOG (ENTER)
  - Leave "Sensor 2" on the OFF setting (ENTER)
  - Leave the "Outdoor Sensor" OFF (ENTER)
  - Select "Electric 1-Zone" under APPLICATION (ENTER)
  - On this screen, hit (ENTER) to enter the menu, then scroll down to "Setup"
  - On the setup menu, scroll down to "Afterrun 1" and hit (ENTER)
  - Default for After run is 2 hours, it is advised to adjust this to a longer time period (3-4 hours) and then dial back from there based on the performance of the system. Once complete, hit (ENTER).
  - Scroll down to "Exit" and hit (ENTER), the initial setup is complete.
7. Run an test run of the system to see if everything is working properly.
  - To run a test of the system hit (ENTER), scroll down to the "Setup" screen and then select "Force Heat," hit (ENTER). The internal relay should click on and the panel(s) should activate as well. After both the panel and activator have powered on, with "force Heat" still selected, hit (ENTER) again to deactivate the activator.

**NOTE:**

- During warmer times of the year, the heating element may not heat enough to be able to determine if it is working properly, therefore the test run is to merely check to see if the activator/panel power on according to their operating procedures. Running another test or checking settings once snowfall has occurred.
- It is NOT recommended to change the default activation temperature.

8. After testing is completed. The system can be powered off during the non-winter months, but being sure to completely power on the activator and panel(s) before the first snow and leave powered on for the entire season.
9. Make any adjustments necessary to activator as required for optimal efficiency for the given application.

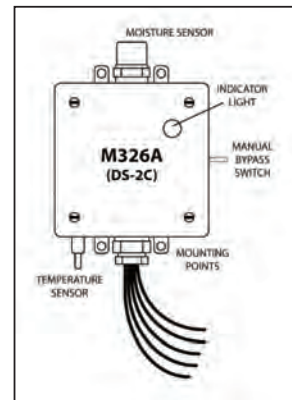


## 13. Activator Quickstart Guides

### 13.2.1 M326A(DS-2C) Activator/Controller



- Control Unit must be mounted outside within close proximity of the SnowMeltz® system(s).
- If not using a panel, power should be ran to the location of the M326A.
- If using a panel, the device requires 120V/240V to operate.
- Wiring/setup for this guide is using one (1) M326A, without a panel (switching up to 30 amps). For other installation situations with panels or accessories, please consult the complete user manuals for the M326A and other devices.



- Mounting be done by mounting on top of a sturdy conduit or using the mounting points on the top and bottom to secure it, ensure that nothing obstructs the sensor from receiving moisture.
- Installation/Setup of the activator should be done AFTER completion of installing the SnowMeltz® system and the substrate is fully cured/completed.

### 13.2.2 SETUP

The following should be performed BEFORE installing the activator and connecting it to power.

1. Remove the four screws on the cover.
2. Look for the five (5) dipswitches near the center of the board.
3. The configuration should be as follows, from top to bottom: (Figure 13.2A)
  - LD (5) to ON
  - LTC (4) to OFF
  - DEL (3) to ON
  - RAIN (2) to OFF
  - SNOW (1) to ON
4. Located the dials on the left side of the board.



Fig. 13.2A



Fig. 13.2B

5. The configuration should be as follows, from top to bottom: (Figure 13.2B)
  - TRIG TEMP to 39
  - DELAY OFF to MID
  - SENSITIVITY to approximately 2 o'clock (one side should point to MORE)
6. Replace cover and secure it with the four screws.
7. Proceed to installing the M326A and wiring it for use.

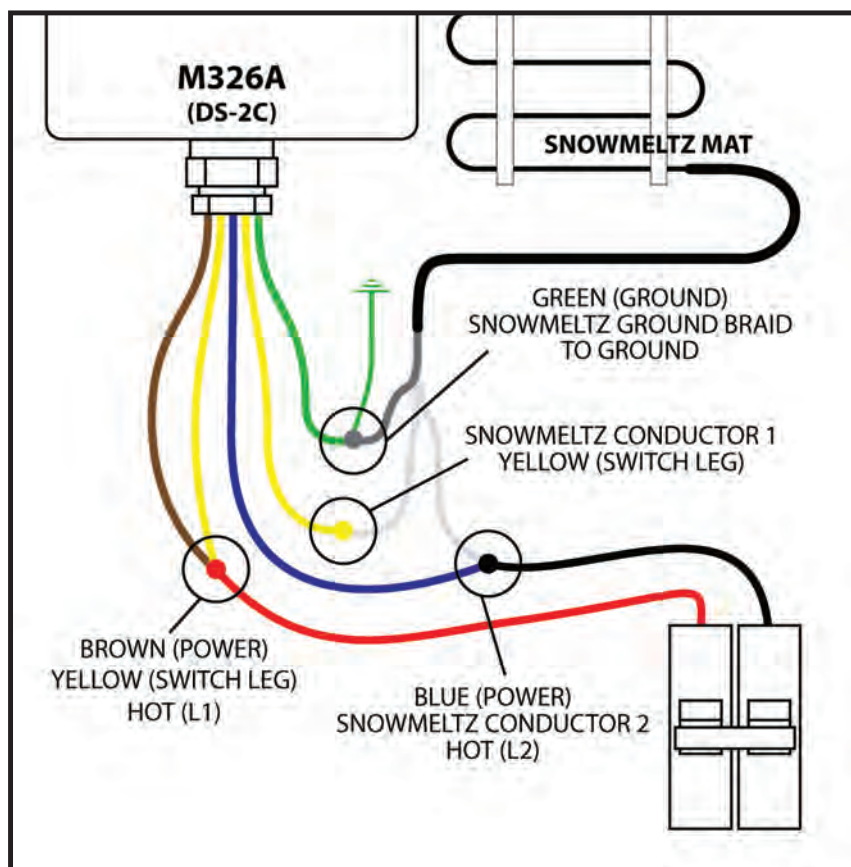
The Activator has now been configured to activate the SnowMeltz® mat(s) once the temperature is below 39 AND snow (moisture) is detected. The system will also remain activated for approximately four (4) hours AFTER moisture is no longer detected. To change the amount of After Run time, adjust the dial labeled "DELAY OFF" to MIN or MAX to lessen or lengthen the After Run time.

**NOTE:**

- The following mounting/wiring instructions assume that a relay panel is NOT being used and power is coming from a single 240 volt circuit. For all other installation instances, please consult the complete installation manuals for the M326A and panels for other installation/wiring instructions.

### 13.2.3 MOUNTING/WIRING - NO PANEL

- Choose a location that will receive the same snowfall as the SnowMeltz® system(s) and that will not be obstructed.
- Best practice is to mount the M326A on top of a weather-proof junction box to make the connections to power and the SnowMeltz® mat(s).
- Be sure to follow local code for the correct gauge of wire for a dual-pole 30 amp 240v circuit.
- Power to the M326A must be off before wiring the unit.
- Wire the green ground wire from the M326A to the silver ground shield from the SnowMeltz® mat and to a suitable grounded wire.
- Take one yellow wire and the brown wire and attach them to one leg of the incoming circuit from the breaker.
- The other yellow wire from the M326A will be wired to one of the copper conductors on the SnowMeltz® mat.
- The blue wire and wire it to the other leg of the incoming power and the other copper conductor from the SnowMeltz® mat.
- Ensure all connections are tight and secure and close the junction box and power up the system.
- The light on the front of the M326A should be solid green, indicating power is being supplied to the unit.
- Test the system to switch the power to MANUAL using the switch on the side of the M326A, the status light should be blinking, indicating the M326A is providing power to the SnowMeltz® mat.
- Return the switch to AUTOMATIC, the installation is now complete.


**NOTE:**

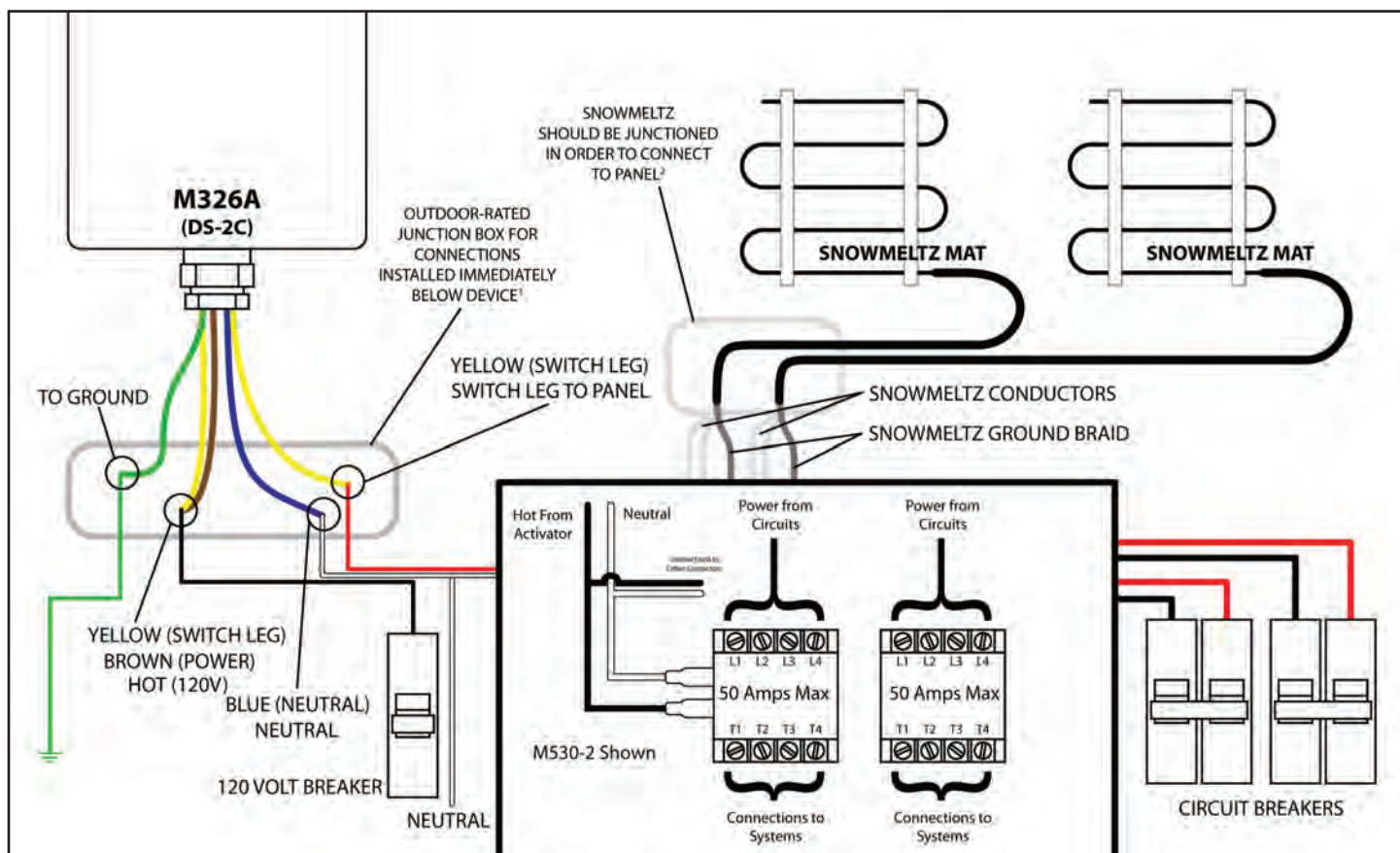
- During warmer times of the year, the heating element may not heat enough to be able to determine if it is working properly, therefore the test run is to merely check to see if the activator powers on according to it's operating procedures. Running another test or checking settings once snowfall has occurred is advisable.





- M530 Series - Contactor panel, perfect for low-budget applications, handles up to 4 circuits, and up to 50 amps per circuit, no GFEP.
- M330 Series - Relay panel without GFEP, handles up to 4 circuits, and up to 30 amps per circuit.
- M330-50 Series - Relay panel without GFEP, handles up to 4 circuits, and up to 50 amps per circuit.
- M330G Series - Relay panel with GFEP, handles up to 4 circuits, and up to 30 amps per circuit.
- M330G-40 Series - Relay panel with GFEP, handles up to 4 circuits, and up to 40 amps per circuit.
- Custom Panels created to project specifications.

For M530 series contactor panels:

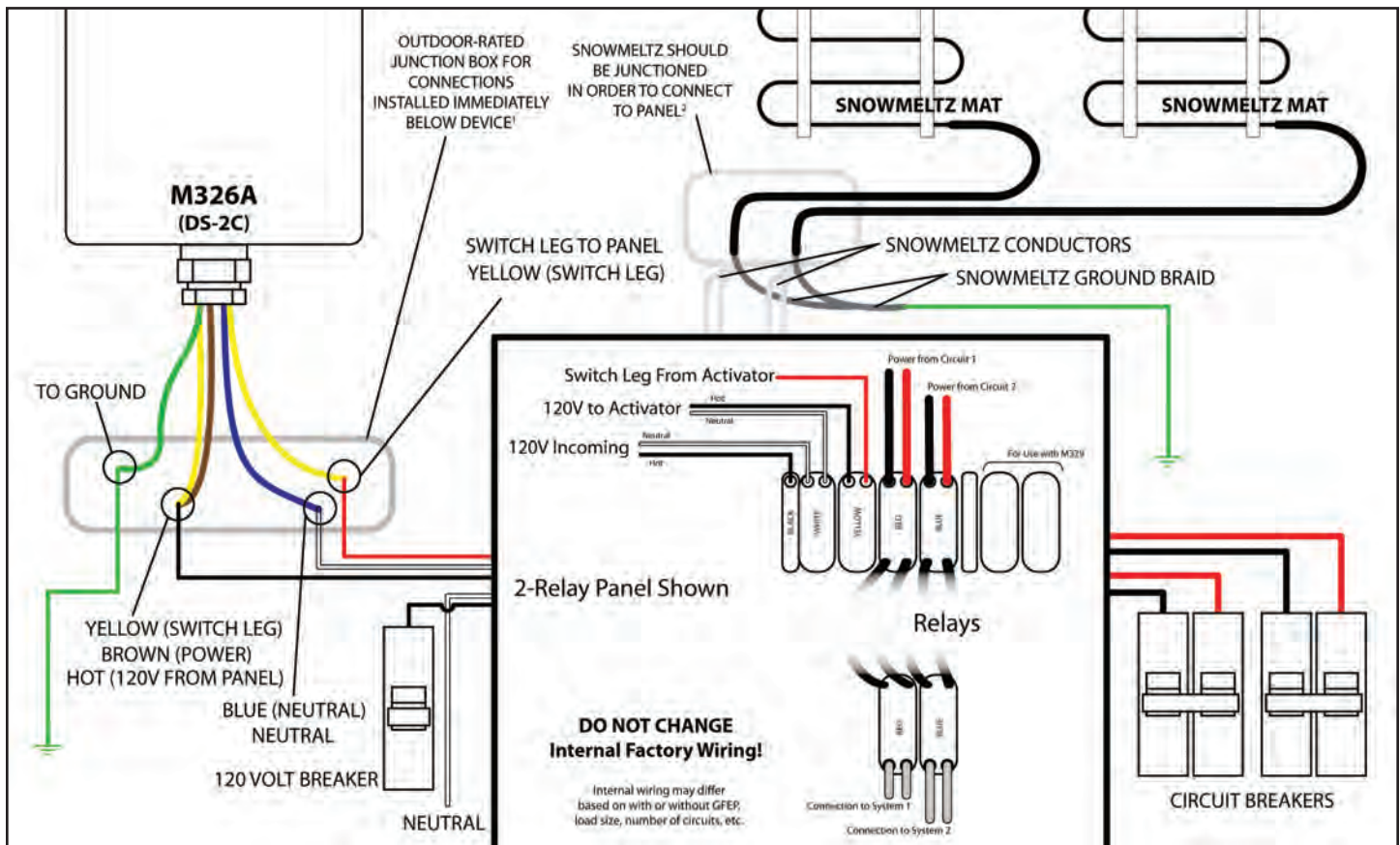


1. Connections to the M326 series activators, CANNOT be made inside the device, they MUST be made in a outdoor-rated junction box mounted below the device. Failure to do so will void the warranty and damage the unit.
2. SnowMeltz cold leads are 20 feet long, in the event that the cold lead(s) are not long enough, they must be junctioned using an appropriate gauge wire for the load/voltage and the appropriate junction box dependant on the location of the box. Please follow local codes for type/gauge of wire and type/rating of junction box to be used.
3. Use the appropriate number and size of breakers for the project, do not overload circuit breakers, or contactors in a panel.
4. Contactors have a maximum capacity of 50 full load amps, do not exceed this rating.

### 13.2.4 MOUNTING/WIRING - WITH PANEL (Continued)



For M330 series relay panels:



#### NOTES:

1. Connections to the M326 series activators, CANNOT be made inside the device, they MUST be made in a outdoor-rated junction box mounted below the device. Failure to do so will void the warranty and damage the unit.
2. SnowMeltz cold leads are 20 feet long, in the event that the cold lead(s) are not long enough, they must be junctioned using an appropriate gauge wire for the load/voltage and the appropriate junction box dependant on the location of the box. Please follow local codes for type/gauge of wire and type/rating of junction box to be used.
3. Use the appropriate number and size of breakers for the project, do not overload circuit breakers or relays in a panel.
4. Consult the instructions for the specific relay panel purchased for it's full load specifications. DO NOT exceed this full load rating.
5. Do not alter, tamper with, or change the factory wiring of any M330 Series relay panel, as this will void the warranty and can cause damage to the panel, connected heating systems, and circuit breakers.



## 14. Troubleshooting

Symptom	Probable Causes	Corrective Action
Area doesn't heat	No voltage.	Check circuit breaker.
	Circuit breaker tripped.	Ensure that the SnowMeltz® system is wired correctly for your application. The SnowMeltz® system requires a dedicated circuit(s). See the Product Selection "Table 1" of this manual
	Contactor/relay panel deactivated	Refer to panel Installation and Operation Manual.
	Activator not configured or wired correctly.	Refer to specific instructions included with the activator purchased for use with this system.
Area activated continuously	Activator not properly configured.	Refer to specific instructions included with the activator purchased for use with this system.
Installation instructions		Download SnowMeltz® Installation instructions from <a href="http://heatizon.com/snowmeltz">heatizon.com/snowmeltz</a>
Cut or damaged the cable		Call Heatizon immediately: 888.239.1232 (8 am - 5 pm, (MST) M-F, Closed holidays)

## 15. FAQs

Q: What can I cut?

A: **The heating cable in the mat CANNOT BE CUT under any circumstances.**

The mat (the white mesh strap) can be cut. The unconnected end of the cold lead can be cut/shortened.

Q: Can SnowMeltz® system be used for interior applications?

A: No, but contact Heatizon to hear about one of our many other solutions for interior applications.

Q: Can SnowMeltz® system be used for roof/gutter heating?

A: No, but contact Heatizon to hear about one of our many other solutions for these scenarios.

Q: Can SnowMeltz® be covered with gravel?

A: No, the airflow around the gravel (no matter the size) will cause the SnowMeltz® system to overheat and burnout.

Q: Where should the activator/sensor be located?

A: Aerial or ground sensors must be located in or close to the area(s) to be heated, and cannot be able to detect moisture unabated. Temperature sensors (either separate or combined) must be able to read an accurate temperature for the area to be heated.

Q: Can multiple mats controlled with one Activator?

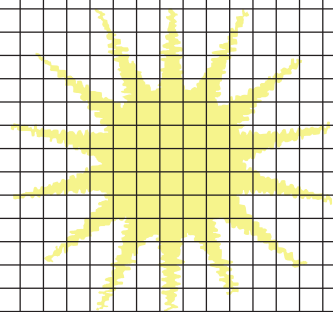
A: Yes as long as the amp load for the activator is not exceeded or a relay/contacter panel is used.

Q: Are the 50 watt versions suitable for residential use?

A: Yes, but normally are overkill and will result in higher electrical consumption. 37 watt versions are suitable for most residential applications according to ASHRAE standards.

Q: Can 37 watt and 50 watt versions be mixed?

A: No, keep similar watt mats together, do not mix 37 watt mats with 50 watt mats.



**HEATIZON**  
SYSTEMS

Use this grid to layout the SnowMeltz® system.

# SnowMeltz® Warranty

Heatizon Systems warrants SnowMeltz® to be free from defects in material and workmanship for a period of ten (10) years and Activation Device(s) for a period of one (1) year. Such warranty periods shall commence on the date of shipment by Heatizon Systems. If any parts are found to be defective in manufacture during such time period, Heatizon Systems will, at its sole option, replace or repair defective parts.



This Limited Warranty applies only if articles sold hereunder (a) are selected, designed, and installed according to instruction and operation manuals furnished by Heatizon Systems and installed in a "workmanlike manner" according to the building association standards adopted by Heatizon Systems, (b) remain in their originally installed location, (c) are connected to proper power supplies, (d) are not misused or abused, (e) show no evidence of tampering, mishandling, neglect, damage (accidental or otherwise), modifications or repair without the approval of Heatizon Systems, or damage done to the product by anyone other than Heatizon Systems, and (f) are installed in accordance with applicable code requirements. Any warranty claims must be made in writing, no later than one (1) month following expiration of the warranty period, and must be accompanied by the warranted part or component. Any claim not made in such manner shall not be honored by Heatizon Systems.

## This Limited Warranty does not cover:

1. The workmanship of any installer of Heatizon Systems radiant panel or cable heating products.
2. Any Heatizon Systems radiant heating products that have a failure or malfunction resulting from improper or negligent operation, installation, accident, abuse, misuse, unauthorized alteration or improper repair or maintenance.
3. Any Heatizon Systems radiant heating products that have had components not purchased from Heatizon Systems integrated into or connected to them.
4. Any labor costs for removal of alleged defective part(s) and/or reinstallation of replacement part(s), transportation to and from Heatizon Systems (if necessary) and any other material necessary to perform the exchange or repair.
5. Any Heatizon Systems heating products that have not been properly registered by completion and return of the Warranty Registration Card attached hereto within ninety (90) days of the date of sale.

## DISCLAIMER OF WARRANTIES:

This warranty described above is in lieu of all other warranties, express or implied, including but not limited to any implied warranties of fitness for a particular purpose and merchantability. Heatizon Systems expressly disclaims and excludes any liability for losses, expenses, inconveniences, consequential, incidental, indirect, or punitive damages for breach of any express or implied warranty. By installing and/or purchasing Heatizon Systems products, you accept the terms of this limited warranty.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

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# SnowMeltz® Installation Registration Form



## SnowMeltz

From Heatizon Systems

4137 South 500 West

Murray, Utah 84123

888-239-1232 | heatizon.com

Instructions: This form must be completed and returned for each installation.

A copy should be retained by the homeowner. An installation is defined as each individual space in which SnowMeltz® is installed such as a driveway, patio, walkway, etc. Each SnowMeltz® shipment includes the following information essential to the proper installation of the products: Installation/Homeowners Manual, Wiring Diagrams, and Megohmmeter and Ohm Readings necessary to test the products. If any of this information is missing from the shipment, please call the dealer or our service department at 1-888-239-1232.

**TO ENSURE WARRANTY PROTECTION FOR THE INSTALLATION(S), THE HOMEOWNER OR INSTALLER MUST COMPLETE ALL THE INFORMATION BELOW FOR EACH INSTALLATION AND RETURN THIS FORM TO HEATIZON SYSTEMS AT THE ADDRESS LISTED BELOW WITHIN 10 DAYS OF THE COMPLETED INSTALLATION.**

### I. Installer Information:

Installer's Name: \_\_\_\_\_ Installation Date: \_\_\_\_ - \_\_\_\_ - \_\_\_\_

Business Address \_\_\_\_\_

Phone Number: \_\_\_\_ - \_\_\_\_ - \_\_\_\_ Email Address: \_\_\_\_\_

Name of Company (from which SnowMeltz® was purchased) \_\_\_\_\_

### II. Owner Information:

Owner's Name: \_\_\_\_\_

Home Address: \_\_\_\_\_

Phone Number: \_\_\_\_ - \_\_\_\_ - \_\_\_\_ Email Address: \_\_\_\_\_

Name of Space and Location where installed: \_\_\_\_\_

### III. Products Used in Installation: (List Each SnowMeltz® Mat on a Separate Line)

(Note: "Hot" or "Neutral" in this table indicates the white conductors in the Cold Lead)

Mat or Cable Number	Model #	Total Watts	Volts	METER READINGS											
				Tests after mat has been received				After Mat is customized/cut and installed				After Mat has been embedded in concrete/asphalt/sand or before final wiring			
				Megher Test	Conductor to Conductor	Conductor to Ground	Conductor to Ground	Megher Test	Conductor to Conductor	Conductor to Ground	Conductor to Ground	Megher Test	Conductor to Conductor	Conductor to Ground	Conductor to Ground
SAMPLE	1x 50	1850	240	532	19.2	Open	Open	532	19.2	Open	Open	532	19.2	Open	Open
#1															
#2															
#3															
#4															
#5															

**Confirmation: The above information was measured and recorded correctly as indicated on the measuring instrument, and the enclosed drawing shows the final layout of the products and the electrical connections.**

Installer's Signature: \_\_\_\_\_

