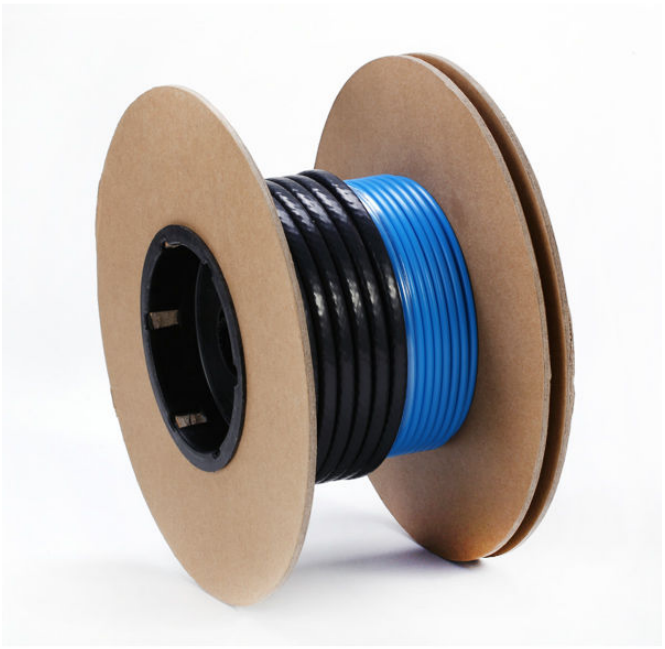
WARMTH technology inc.

Installation Manual

Electric Floor Heating Cable & Controls



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⚠ WARNING

Shock and fire hazard

If the TCWarmth System is damaged or not installed properly, fire or shock could occur resulting in serious personal injuries or damage to property. You must carefully follow the warnings and instructions contained in this manual.

· A **GFCI type and UL/CSA Listed** thermostat must be used.

· It is ***important*** that this equipment is installed only by qualified electricians who are familiar with the proper sizing, installation, construction and operation of floor warming system and the hazards involved. The installation must comply with all national and local electrical codes. If you are unfamiliar with these requirements, contact an electrician.

· The heating cable is designed for under floor heating purposes only. Be sure that the floor is not penetrated by nails, screws, or similar devices that can cause damage on first installation or during subsequent floor repairs in the future.

· If the TCWarmth System is damaged, it must be replaced. Do not attempt to splice or repair any part of the system.

1. General Information

1.1 Use of the Manual

This manual describes the TCWarmth floor heating system — how to design the room, select the product, and install the system. It is important to thoroughly review this manual and the following document prior to installation:

The Thermostat Installation and Operation Manual

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

Warmth Technology Inc.
5265 Steeles Ave. W
North York, ON
M9L 2W2 CANADA
Tel: 289 622 1504
www.warmthtech.ca
info@warmthtech.ca

1.2 Safety Guidelines

The safety and reliability of any floor heating 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 TCWarmth system performs reliably.

Pay special attention to the following:

·Instructions marked  Important

·Safety warnings identified as  WARNING

1.3 Remember to measure resistance

The resistance should be measured between the two conductors, white and black. Compare this resistance reading to the resistance specified in the Product Selection “Table 1 or Table 2”. The value should be within ±10%. If you get a different reading, contact Warmth Technology Inc. at 289 622 1504.

Also, measure the resistance between the white, black and shielding/ground wire. Both should read infinity. If you get a different reading, contact Warmth Technology Inc. at 289 622 1504.

Please refer to “5 Commissioning” for instructions on how to measure the resistance.

 **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 thin set cement or self-leveler application and after final surface installation). Please refer to WARRANTY CARD.

1.4 Limited Warranty

For a period of twenty five (25) years from the date of purchase Warmth Technology Inc. warrants that the TCWarmth heating cable is free from defects in material, design and workmanship. The extended warranty is only valid if the WARRANTY CARD has been properly completed and mailed, and the installation is in accordance with the installation instructions.

For warranty and safety purposes, The TCWarmth must only be connected to Warmth Technology Inc. thermostats which have GFCI approval.

2 TCWarmth System

2.1 TCWarmth Specifications

Cable Construction:	Twin Conductor
Rated Voltage:	120V,240V
Output:	3W/ft (9.84W/m)±10%
Heating Element Size:	40'(12.2 m) to 800'(243.8 m)
Bending radius:	1" (25.4mm)
Cable Diameter:	1/8"-1/6" (3.2mm-4.2mm)
Conductor Insulation:	Fluoropolymer
Outer Insulation:	Fluoropolymer or PVC
Max. Ambient Temp.:	77 °F (25 °C)
Min. Installation Temp.:	40 °F (5 °C)
Cold lead	2-wire 16 AWG plus ground braid; 10ft (3m) length

2.2 Thermostat Specifications

Functions:	On/Off control, digital display, 7-day programmable
Supply Voltage :	120/240 V ±15%, 50/60 Hz
Maximum switching current :	16 Amp
Temperature control range :	40 to 104 °F (5 to 40 °C)
Ambient range :	32 to 104 °F (0 to 40 °C)
Floor temperature sensor :	2-wire, 10-foot lead wire

2.3 TCWarmth typical installations and applications

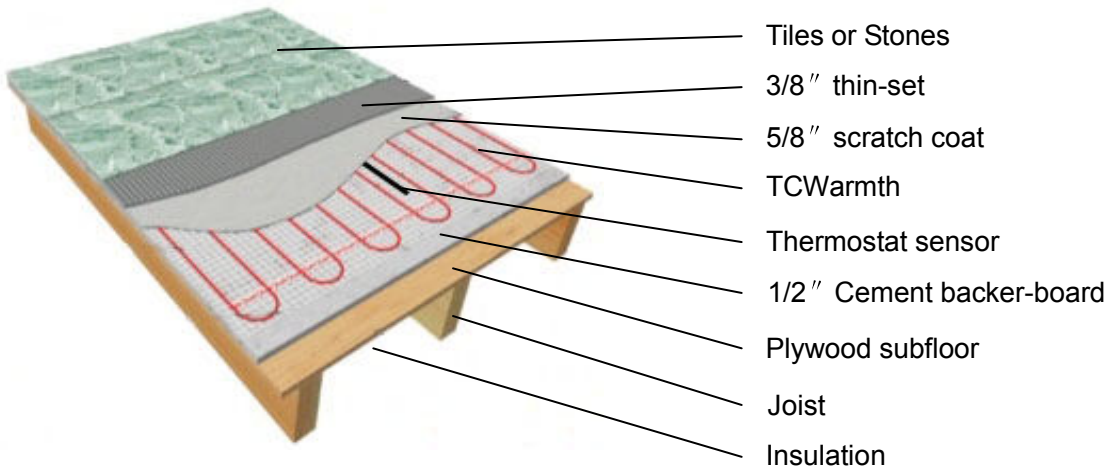

Figure 1: Directly on plywood

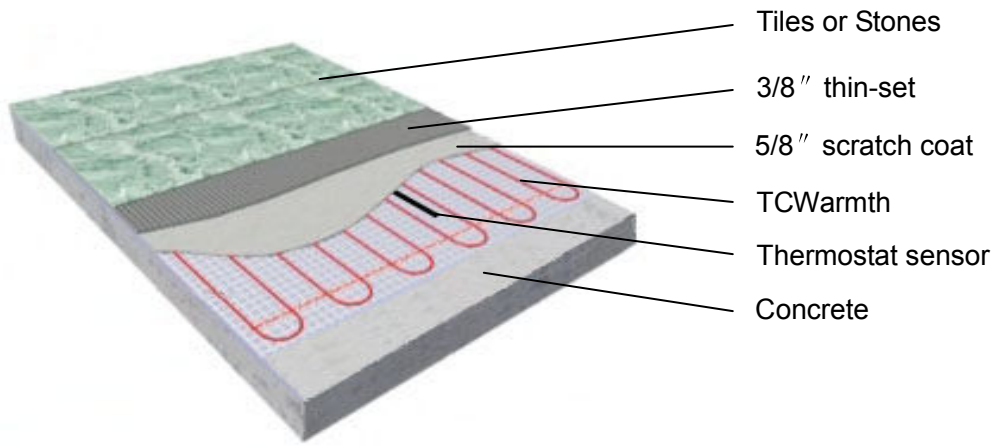

Figure 2: Directly on concrete

Alternative method: self-leveling cement is recommended for large surfaces.

3 Floor Heating Design and Product Selection

3.1 Design the Installation

Step 1: Measure the heated area

Determine the heated area of the floor where there are no permanent fixtures or furniture such as showers, toilets, vanities, or cabinets. Measure the heated area of the floor.

For example, in Figure 3, the area of the bathroom is 96 ft^2. When you subtract the area of the vanity, shower and toilet, the total heated area is only 74 ft^2.

Step 2: Determine the power supply voltage

The available supply voltages include 120 V, 208 V or 240 V.

Important: Operating the 240V cable at 208V reduces the power output to approximately 2.25W/ft. (25% reduction)

Step 3: Plan the design

Determine the optimum floor heating Cable layout for your heated area to ensure coverage. Select a spot for the thermostat in the wall above the heated area where it can be reached by the 10-foot cold lead on the TCWarmth, and the 10-foot floor temperature sensor. Please refer to Figure 4.

Important: The predetermined TCWarmth spacing must be maintained to ensure proper floor heating. Do not change the TCWarmth heating cable spacing when you lay out the cable or the floor may have cold spots.

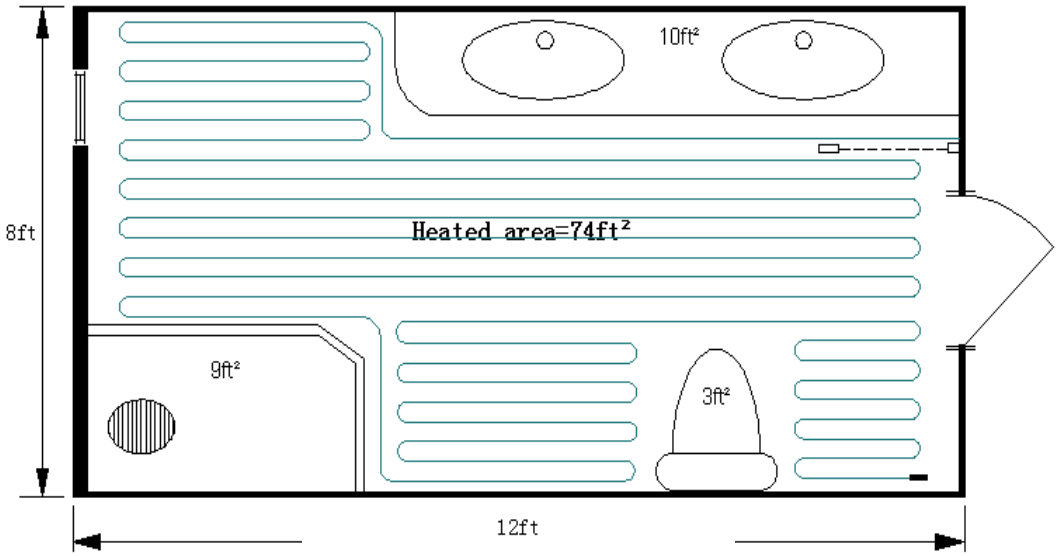

Figure 3: Directly on concrete

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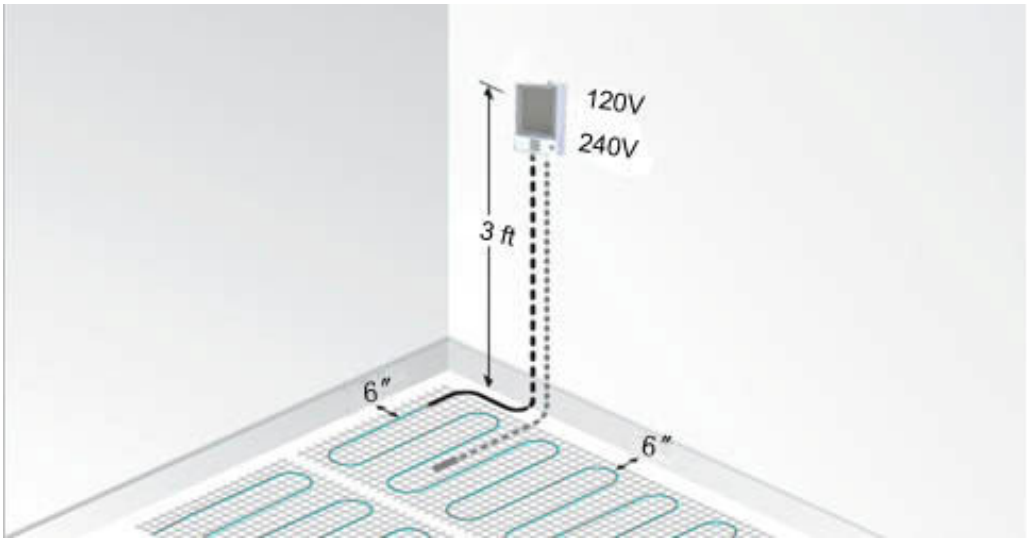


Figure 4: Typical cold lead and floor temperature sensor

3.2 Confirm Your Product Selection

Confirm that your TCWarmth is no larger than the heated area. Following the example from Figure 3, if the heated area is 74 ft^2, select the 70 ft^2 TCWarmth system.

Table 1:120V Product Selection

120V	Length		Approximate heat coverage (sq.ft.)			Watts (3W/ft.)	Amps	ohms
Catalog Number	ft.	m	Standard 2" spacing	Standard 3" spacing	Standard 4" spacing			
TC1V-0120	40	12.2	5	10	15	120	1.0	120.0
TC1V -0180	60	18.3	10	15	20	180	1.5	80.0
TC1V-0240	80	24.4	15	20	25	240	2.0	60.0
TC1V-0300	100	30.5	18	25	35	300	2.5	48.0
TC1V-0360	120	36.6	20	30	40	360	3.0	40.0
TC1V-0420	140	42.7	23	35	50	420	3.5	34.3
TC1V-0480	160	48.8	25	40	55	480	4.0	30.0
TC1V-0540	180	54.9	30	45	60	540	4.5	26.7
TC1V-0600	200	61.0	35	50	65	600	5.0	24.0
TC1V-0720	240	73.2	40	60	80	720	6.0	20.0
TC1V-0840	280	85.3	45	70	95	840	7.0	17.1
TC1V-0960	320	97.5	55	80	105	960	8.0	15.0
TC1V-1080	360	109.7	60	90	120	1080	9.0	13.3
TC1V-1200	400	121.9	65	100	135	1200	10.0	12.0

Table 2: 240V Product Selection

240V	Length		Approximate heat coverage (sq.ft.)			Watts (3W/ft.)	Amps	ohms
Catalog Number	ft.	m	Standard 2" spacing	Standard 3" spacing	Standard 4" spacing			
TC2V-0240	80	24.4	15	20	25	240	1.0	240.0
TC2V-0360	120	36.6	20	30	40	360	1.5	160.0
TC2V-0480	160	48.8	25	40	55	480	2.0	120.0
TC2V-0600	200	61.0	35	50	65	600	2.5	96.0
TC2V-0720	240	73.2	40	60	80	720	3.0	80.0
TC2V-0840	280	85.3	45	70	95	840	3.5	68.6
TC2V-0960	320	97.5	55	80	105	960	4.0	60.0
TC2V-1080	360	109.7	60	90	120	1080	4.5	53.3
TC2V-1200	400	121.9	65	100	135	1200	5.0	48.0
TC2V-1320	440	134.1	75	110	145	1320	5.5	43.6
TC2V-1440	480	146.3	80	120	160	1440	6.0	40.0
TC2V-1680	560	170.7	95	140	190	1680	7.0	34.3
TC2V-1920	640	195.1	105	160	210	1920	8.0	30.0
TC2V-2160	720	219.5	120	180	240	2160	9.0	26.7
TC2V-2400	800	243.8	135	200	265	2400	10.0	24.0

3.3 Confirm Your Thermostat Selection

A thermostat must be used, please contact Warmth Technology Inc.

For warranty and safety purposes, The TCWarmths must only be connected to Warmth Technology Inc. thermostats which have GFCI approval.

Please refer to “APPENDIX A” and the “Thermostat Installation and Operation Manual” for how to install the thermostat.

4 Installation

Important

· Read the instructions carefully before installing TCWarmth system.
· Remember to measure the resistance four times.
· Do not install TCWarmth in walls or ceilings.
· The cable must be embedded in mortar, thinset, concrete or similar material.
· The heating cable shall not extend beyond the room or area in which it originates.
· If the TCWarmth System is damaged, you need to inspect and remove damaged or defective cables before they are covered or concealed.
· The minimum installation temperature is 40 ℉ (5 ℃).
· The heating cable cannot be cut to length, crossed over itself, or installed too close.
· The minimum distance between the cables must be 2”or greater.
· Avoid placing the heating cable any closer than 2 inches from other items such as combustible materials.
· It is recommended to use copper wire only.
· Installing the non-heating leads in listed conduit as the leads exit the floor.
· Remember to check that the supply voltage matches the voltage of the TCWarmth.
· Remember to place the labels as written in this instruction.
· Only for indoor installation.
· Metal structures or materials used for the support of or on which the TCWarmth is installed must be grounded in accordance with CSA Standard C22.1, section 10 and the NEC.
· All electrical work must be done by a qualified licensed electrician in accordance with local building and electrical codes, and the National Electrical Code (NEC), especially Article 424, Part IX of the NEC, ANSI/NFPA70 and Section 62 of CEC Part 1.

Please consult the factory for any other questions or advice.

Important: Materials and Tools required

Materials:

· TCWarmth system, TCWarmth strap

· Thermostat control with floor sensor, 20-amp circuit breaker

· Electrical box (extra deep) for the control; single-gang (not a gangable type) or 4”-square deep box with a single-gang “mud ring” cover, 4”junction box with a cover, if needed

· Cable clamps for junction box (for new construction)

· Flexible or rigid conduit (for all construction)

· 12-gauge or 14-gauge electrical wiring cable (consult local code)

· Wire nuts if using a junction box

· Nail plate

· Polymer-modified cement based mortar

Tools:

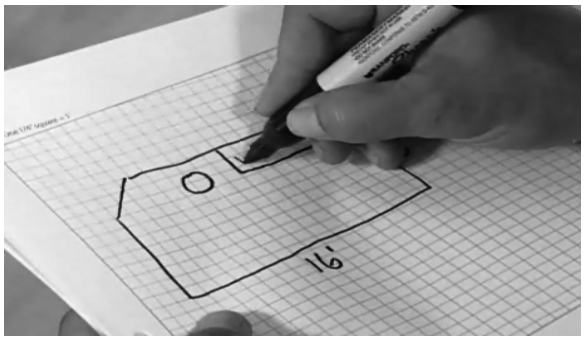
Scissors, Utility knife, Wire strippers, Tape measure, Screwdriver, Multimeter;

You will also need the appropriate tools and materials to install your particular floor. These will likely include products like self-leveling mortar, thin-set mortar, backer board, tile, a notched trowel, and any other tools for your specific floor.

Follow these steps to ensure a successful TCWarmth installation.

Step 1: PLAN LAYOUT

Make a sketch layout or a floor plan of the room; include all permanent furnishings such as toilets, bathtubs, appliances, cabinetry, etc. Indicate all dimensions required to determine the available floor area and the position of the thermostat.



Important:

Warmth Technology Inc. recommends that the installation is documented with photos to note the location of connections and the sensor.

Step 2: TRANSFER LAYOUT TO FLOOR

Draw an outline of the layout on the room floor including a foot print of all furnishings that are not yet installed. Unroll the first few feet of the TCWarmth heating cable. The starting point of the cable must be placed within 10 ft. from the thermostat.

Using your floor plan determines your desired spacing of cable (2", standard 3" c-c for 12W/sq.ft. or 4" c-c for 9W/sq.ft.) and strapping (recommended 2'-3' apart).

Important:

Minimum distance between the cables must be 2"or greater. Mark the position of the connection point between the power lead and the blue TCWarmth heating cable. **This connection must be concealed in thinset or self-leveling cement.** When using a floor temperature sensing thermostat, mark the sensor position in the middle of 2 heating cables, about 10 in. (25cm) away from the wall (within the heated area), as close as possible to the thermostat.

Step 3: INSTALL SENSOR

If using a floor temperature sensing thermostat, install the sensor now, either in conduit tube, or directly to the subfloor. It is recommended that the sensor be installed in conduit tube. This will allow the sensor to be easily replaced in the unlikely event of failure.

The sensor and/or tube needs to be installed between the thermostat wall box and the sensor position. The conduit tube must be partially countersunk into the subfloor. Cut a channel approximately 5⁄16" deep × 5⁄16" wide in the floor and wall up to the thermostat for the sensor conduit. The conduit has to go from the thermostat and minimum of 10" away from the wall towards the middle of the floor.

Important:

The sensor conduit must be centered in the cable loop (between two blue heating wires).
Use duct tape to close the end of the conduit so that thinset can't penetrate the conduit.
Use duct tape to hold the sensor conduit into the groove to prevent it from floating up when the mortar or thinset is poured.
If the sensor is installed directly in the mortar bed, use duct tape to secure to subfloor.

Step 4: PREPARE SUBFLOOR SURFACE

Clean and vacuum the floor thoroughly and remove dust and debris from the floor that may damage the heating cable.

Ensure that the subfloor is secure and stable. Carefully fill in all cracks to prevent any potential damage to the new tiles resulting from shifts in the subfloor.

Step 5: MEASURE THE RESISTANCE (THE FIRST TIME)

Use a digital ohm meter to measure the resistance of the TCWarmth and compare it to "Table1 or Table 2". Record the measured resistance on the WARRANTY CARD. Documenting the resistance at each stage of installation is required for warranty purposes. Also, measure the resistance between the white, black and shielding/ground wire. Both should read infinity.

Please refer to "5 Commissioning" for instructions on how to measure the resistance.

Step 6: BEGIN LAYING THE TCWarmth

Place the cable so that the connection point and the temperature sensor are in their intended positions and bring the power lead cable to the thermostat or connection box.

Begin laying the TCWarmth heating cable according to the layout developed in Step 1.

DO NOT CUT OR SHORTEN THE BLUE HEATING CABLE!

Do not expose it to any mechanical stress. Avoid walking on the heating cable. Use TCWarmth strapping to secure the cable to the subfloor. Attach the TCWarmth strapping with adhesive, nails, staples, or double-sided tape. Please refer to Step 8 for instructions on how to use the TCWarmth strapping.

ENSURE THAT THE SENSOR CONDUIT HAS BEEN PROPERLY INSTALLED BEFORE PROCEEDING (refer to Step 3).

It is highly recommend to take photographs of the installed TCWarmth before installing the flooring.

Step 7: MEASURE THE RESISTANCE (THE SECOND TIME)

Please refer to Step 5.

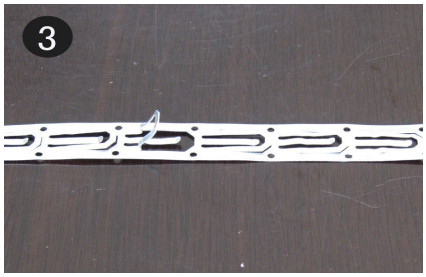
Step 8: TCWarmth STRAPPING INSTRUCTIONS

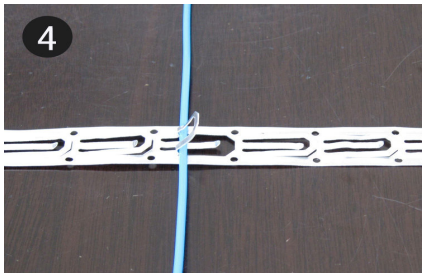
Space the strapping at a distance of 2' to 3' (maximum recommended spacing is 3 feet).

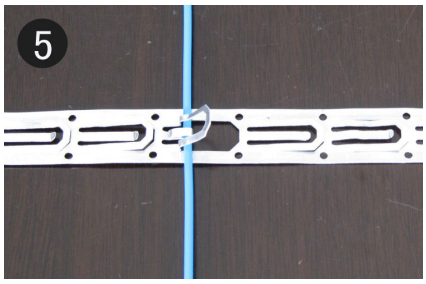
Secure the strapping to the subfloor with adhesive, staples, nails, or double-sided tape.

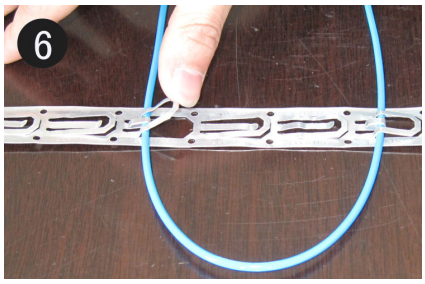
Standard cable spacing is 3"c-c.

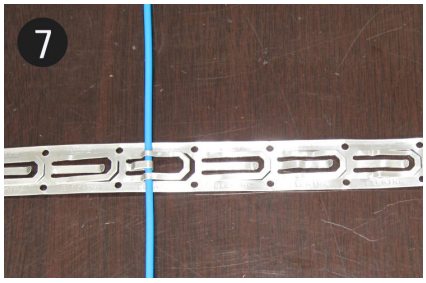
Steel strapping：

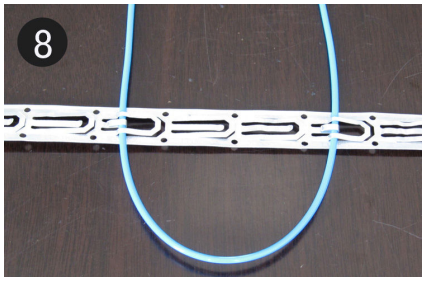




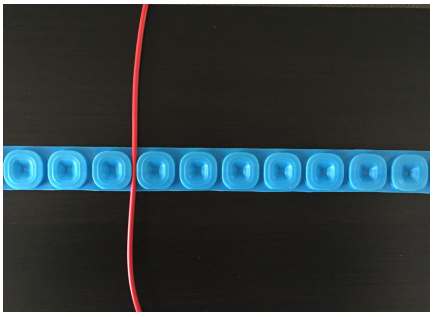


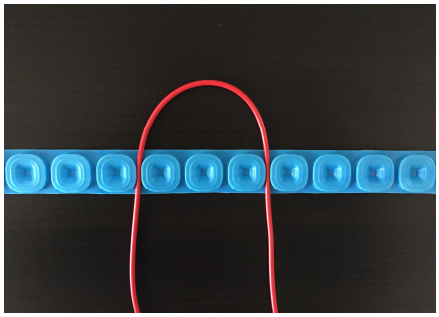




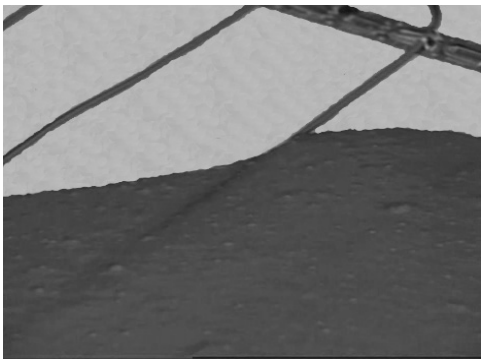


Plastic strapping:





Step 9: Embed the floor heating cable in mortar



After laying out the floor heating cable, apply a 5⁄8”thick acrylic or latex modified thin-set over the cable. Be sure to use the flat side of the trowel to avoid any damage to the cable.

Spread the mortar evenly over the cable filling in all voids between the floor, strapping and heating cable. Once the surface is smooth and

even, allow it to cure to a hard surface before installing the tile or stone.

Important: The system must not be turned on until the thin-set cement has fully dried. A minimum of two weeks is recommended.

If insulation needs to be installed please insure that the R-value under the heating element will not be more than 8, above the heating element the installation materials and the floor covering have a total thermal resistance will not be more than 1.

Step 10: MEASURE THE RESISTANCE (THE THIRD TIME)

Please refer to Step 5.

Step 11: Install the tile

To install the tile, apply a 3/8"thick layer of acrylic or latex modified thin-set using the ridged side of your trowel. Tile and grout the floor using best industry practices and in accordance with instructions provided by the manufacturer of the tile.

Step 12: CONNECT POWER SUPPLY AND THERMOSTAT

The connection of the power supply and the thermostat must be done by a qualified electrician in accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC). The electrician should connect the floor sensor to the thermostat, take the final resistance reading and record it on the WARRANTY CARD, see Step 13.

Note: You need to mark the appropriate circuit breaker reference label indicating which branch circuit supplies the circuits to those electric space heating cables.

Step 13: MEASURE THE RESISTANCE (THE FOURTH TIME)

Please refer to Step 5.

Step 14: RECORD INFORMATION AND AFFIX LABELS

It is important for the homeowner to mail in the certificate immediately after installing the system (cable and thermostat). Failure to do so could void the manufacturer's warranty. The warranty is subject to the guarantee conditions listed on the warranty certificate.

Keep a copy of the WARRANTY CARD for your reference.

Step 15: ENJOY THE COMFORT OF TCWarmth

The TCWarmth heating system is now ready to use. Increase the floor temperature gradually and adjust it until it reaches a comfortable level depending on the type of room and your personal preferences.

5 Commissioning

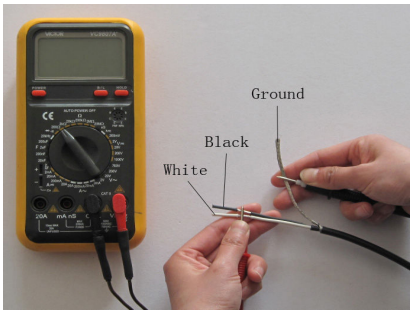
Important:

For the extended 25-year limited warranty to apply, you must perform these tests, record the results on the WARRANTY CARD, and retain a copy of the record.

You must perform the Insulation Resistance Test, the Heating Cable Resistance Test, and the Sensor Resistance Test four times (Please refer to 4 installation) during the installation process.

5.1 Insulation Resistance Test

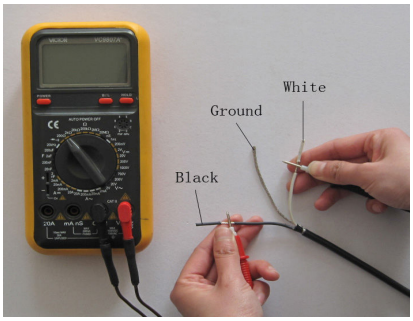
This test ensures that the insulating jackets of the cable are not damaged. A low value indicates the cable has been damaged and must be replaced.



1. Connect the ground wire to the black lead and both power wires to the red lead of the multimeter.
2. Make sure the meter reads “Open” or “OL.” If you get a different reading, contact Warmth Technology Inc.
3. Record these readings on the WARRANTY CARD.

5.2 Heating Cable Resistance Test

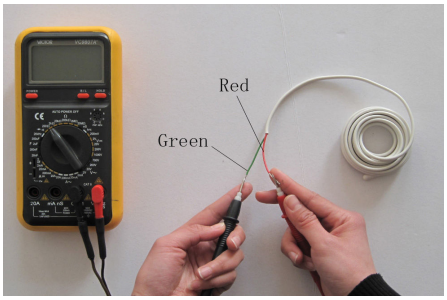
This test measures the resistance of the TCWarmth and is used to determine circuit integrity.



1. Set your multimeter to the 200 or 2000 ohm range.
2. Connect the multimeter leads to the black and white cold lead wires.
3. Compare this resistance reading to the resistance specified in the Product Selection “Table 1 or Table 2”. The value should be within ±10%. If you get a different reading, contact Warmth Technology Inc. at 289 622 1504.
4. Record these readings on the WARRANTY CARD.

5.3 Sensor Resistance Test

This test measures the resistance of the floor sensor and is used to verify the sensor integrity.



1. Set your multimeter to the 200K ohm range.
2. Connect the multimeter leads to the red and green lead wires.
3. Make sure the meter reads between 9-25K ohms. If you get a different reading, contact Warmth Technology Inc. at 289 622 1504.
4. Record these readings on the WARRANTY CARD.

6 Wet Environment Installations

CAUTION: Wet environment installations are for CUL marked products listed for installations in Canada only.

Note: Acceptance of this application must be verified by the local inspector or authority having jurisdiction (AHJ).

1. Never install FC Cables in shower walls (or any other wall).
2. Never make a field splice to mats installed in a shower.
3. Never begin the cable in a shower. The connection between the power lead and the heating wire must be fully embedded in mortar and located at least 1' (304.8 mm) away from shower openings and other areas normally exposed to water.
4. All grout seams should be sealed after the mortar and grout has completely cured.
5. As an option, consider installing a dedicated cable in the shower area, separate from the rest of the floor. This will increase control options, allowing less floor to be warmed when the shower is not required. It will also allow for better isolation of the shower area in the off-chance a problem occurs

WARNINGS: Do not begin the cable inside the shower area. The controls should NEVER be installed in the shower area, or where anyone in the shower could touch the controls. Install the controls a minimum of 4' away from the shower area. Locate power lead and connection to heating element outside the shower area.

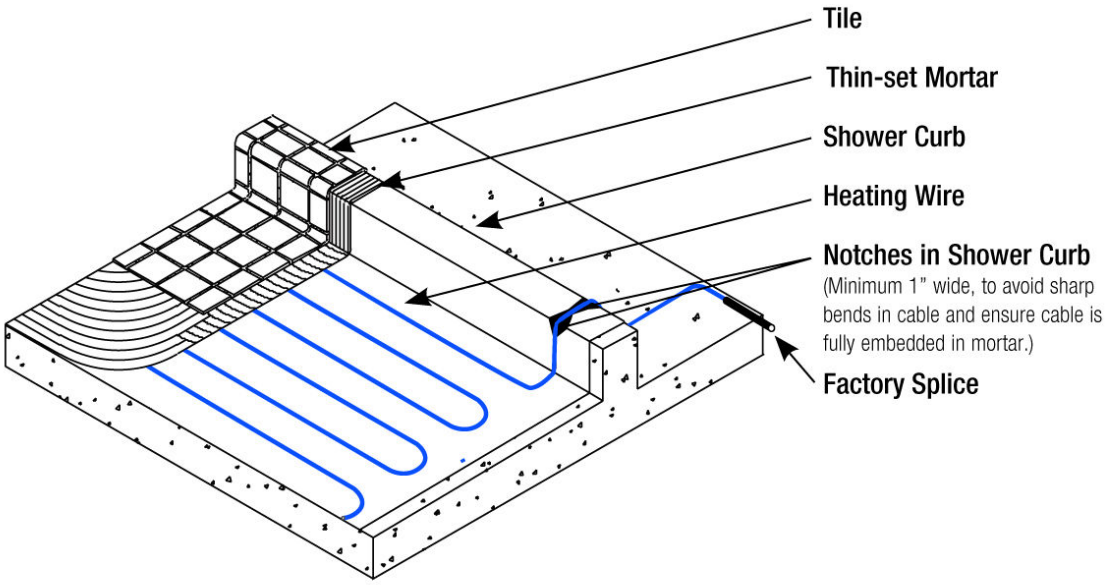
TCWarmth may be installed in wet environments such as a shower bed or sauna*. TCWarmth must be installed on top of the mortar bed/dry pack before the installation of the tile/stone.

Follow these steps to install TCWarmth in a wet environment:

1. MEASURE THE RESISTANCE (THE FIRST TIME, refer to step 5).
2. After the mortar bed has fully set, use hot glue to secure TCWarmth strapping onto the mortar bed.
3. Install the TCWarmth with 3” spacing between cable runs. Ensure the heating cable maintains a moderate tension throughout.
4. To continue the heating cable up to the shower bench (to heat the shower bench), use hot glue to secure the heating cable onto the wall of the shower bench.
5. Due to the slope of the mortar bed, the cable will become suspended above certain areas of the shower floor. Use hot glue to re-secure the cable onto the mortar bed, ensuring it follows the contours of the slope.
6. MEASURE THE RESISTANCE (THE SECOND TIME, refer to step 5).
7. Prepare the thinset mortar as per manufacturer’s instructions.

8. Using a flat trowel, pull the trowel at a 45-degree angle (following the same direction as the cable) and spread a thin layer of thinset mortar over the cable. The cable must be completely covered and only the very top of the guides should be visible.
9. Allow the thinset mortar to set as per manufacturer's instructions.
10. MEASURE THE RESISTANCE (THE THIRD TIME, refer to step 5).
11. Proceed with laying the floor covering as per manufacturer's instructions.
12. MEASURE THE RESISTANCE (THE FOURTH TIME, refer to step 5).

Tip: Make a 1" wide notch in the curb to embed the heating wire. Ensure the wire is not pinched or bent sharply. Do not run the heating wire through a non-masonry curb, causing it to overheat.



CAUTION: Do not allow the tip of the hot glue gun to touch the cable as it may cause damage.

NOTE: Cable or Mat controls must be located at least 4' away from shower openings. Controls cannot be exposed to water or touched by a person while in the shower area.

* Installations must be in accordance to the Canadian Electrical Code Part 1 or the National Electrical Code (US) whichever is applicable.

7 Troubleshooting

Symptom	Probable Causes	Corrective Action
Floor doesn't heat	No voltage.	Check circuit breaker.
	Circuit breaker tripped.	Ensure that there are not too many cables or other appliances connected on the same circuit. The TCWarmth may require a dedicated circuit. See the Product Selection "Table 1 or Table 2" of this manual.
	Ground-fault tripped in the thermostat.	Refer to the Thermostat Installation and Operation Manual.
	The Thermostat not turned on.	Refer to Section 4 of this manual, and the Thermostat Installation and Operation Manual.
	Cable not connected to the thermostat.	Refer to The Thermostat Installation and Operation Manual.
	Floor temperature sensor not connected.	Refer to The Thermostat Installation and Operation Manual.
	Faulty sensor.	Contact Warmth Technology Inc.
Floor warm all the time	Clock not set correctly.	Refer to The Thermostat Installation and Operation Manual.
Floor not warm enough	The thermostat setting not set correctly.	Refer to the Thermostat Installation and Operation Manual.
Installation instructions not available		Download the latest version of TCWarmth system Installation Instructions from www.warmthtech.ca

EXTENDED WARRANTY

For a period of twenty five (25) years from the date of purchase Warmth Technology Inc. warrants that the TCWarmth heating cable is free from defects in material, design and workmanship. The extended warranty is only valid if the WARRANTY CARD has been properly completed and mailed, and the installation is in accordance with the installation instructions.

The defective TCWarmth heating cable has to be inspected by or submitted to Warmth Technology Inc. or an authorized TCWarmth dealer. Failure to comply with all of the foregoing will void this extended warranty. Warmth Technology Inc. will, when the customer has documented that a defect in the TCWarmth was present at the date of delivery, repair or supply a new TCWarmth at Warmth Technology Inc. option. All claims shall be made within the extended warranty period. Warmth Technology Inc. shall not be liable for any claims made later than ten years from date of purchase.

Warmth Technology Inc. shall not be liable for any consequential and secondary costs or damages linked to the defect or replacement of the TCWarmth. Warmth Technology Inc. will be liable for any costs related to the dismantling of defective product and the installation of a new product; however such liability is limited to the amount of five (5) times the initial product costs for each damage/case.

THE FOREGOING WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ON THE PART OF WARMTH TECHNOLOGY INC. WARMTH TECHNOLOGY INC. DISCLAIMS ANY WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. WARMTH TECHNOLOGY INC. NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON, FIRM OR CORPORATION TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH SALE OR PRODUCT. WARMTH TECHNOLOGY INC. SHALL NOT BE HELD RESPONSIBLE FOR DAMAGE TO PERSON OR PROPERTY, CONSEQUENTIAL LOSS, LOSS OF PROFIT, LOSSES ON GOODS IN STORE, OR THE LIKE WHICH MIGHT ARISE OUT OF THE FAILURE OF THE EQUIPMENT DELIVERED, IRRESPECTIVE OF THE CAUSE (INCLUDING FAULTY MANUFACTURE).

How to claim this warranty

Contact the company's Customer Service department and provide the following information:

1) Nature of the manufacturing defect
2) Date of purchase and, if already installed, date of installation
3) If installed, name of electrician and flooring installer
4) Resistance readings taken by installer
5) Proof of purchase and serial number from product label

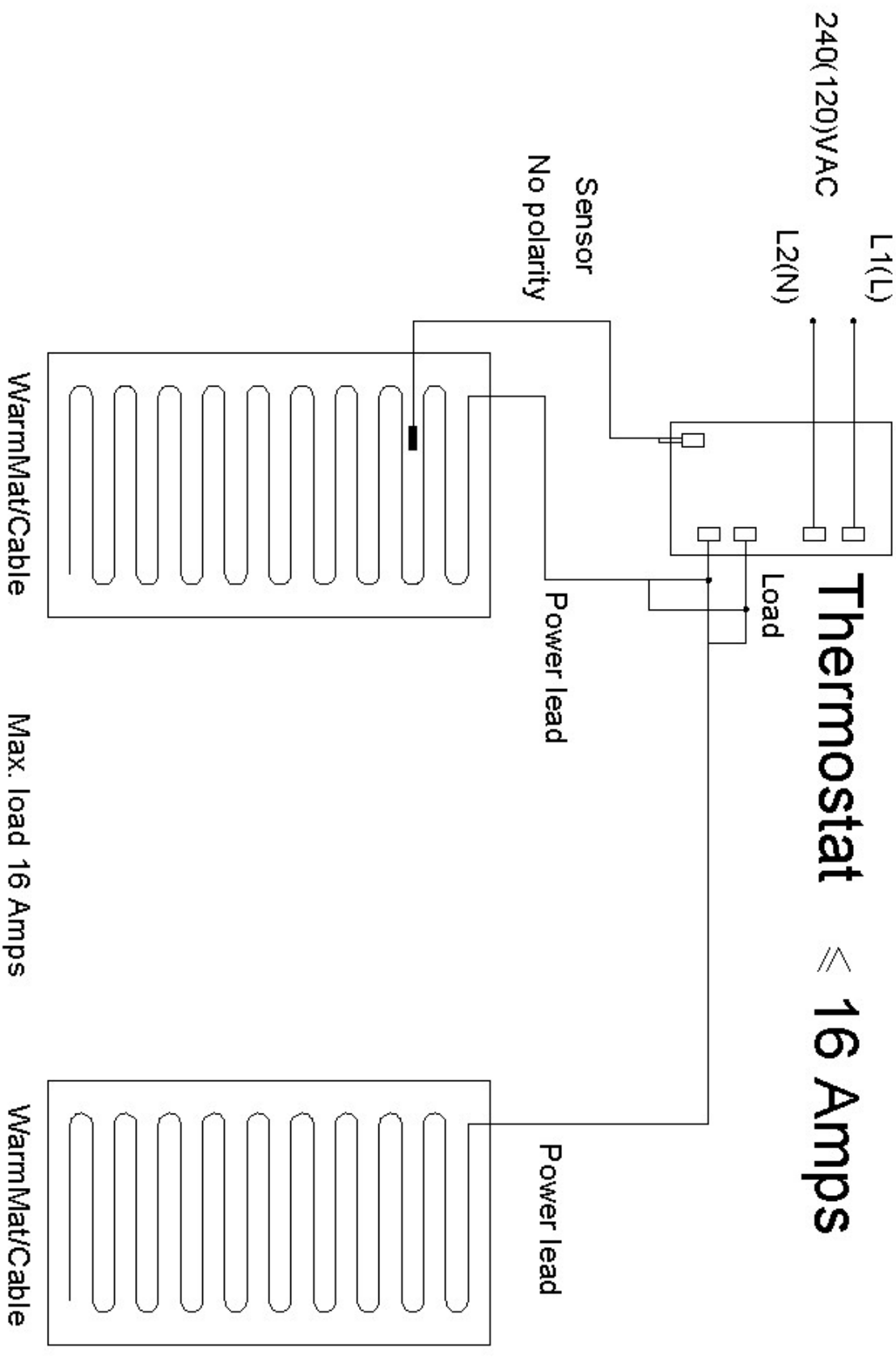
Our Customer Service department will provide you with an authorization number and advise you on the next steps to complete your warranty claim.

Disclaimer:

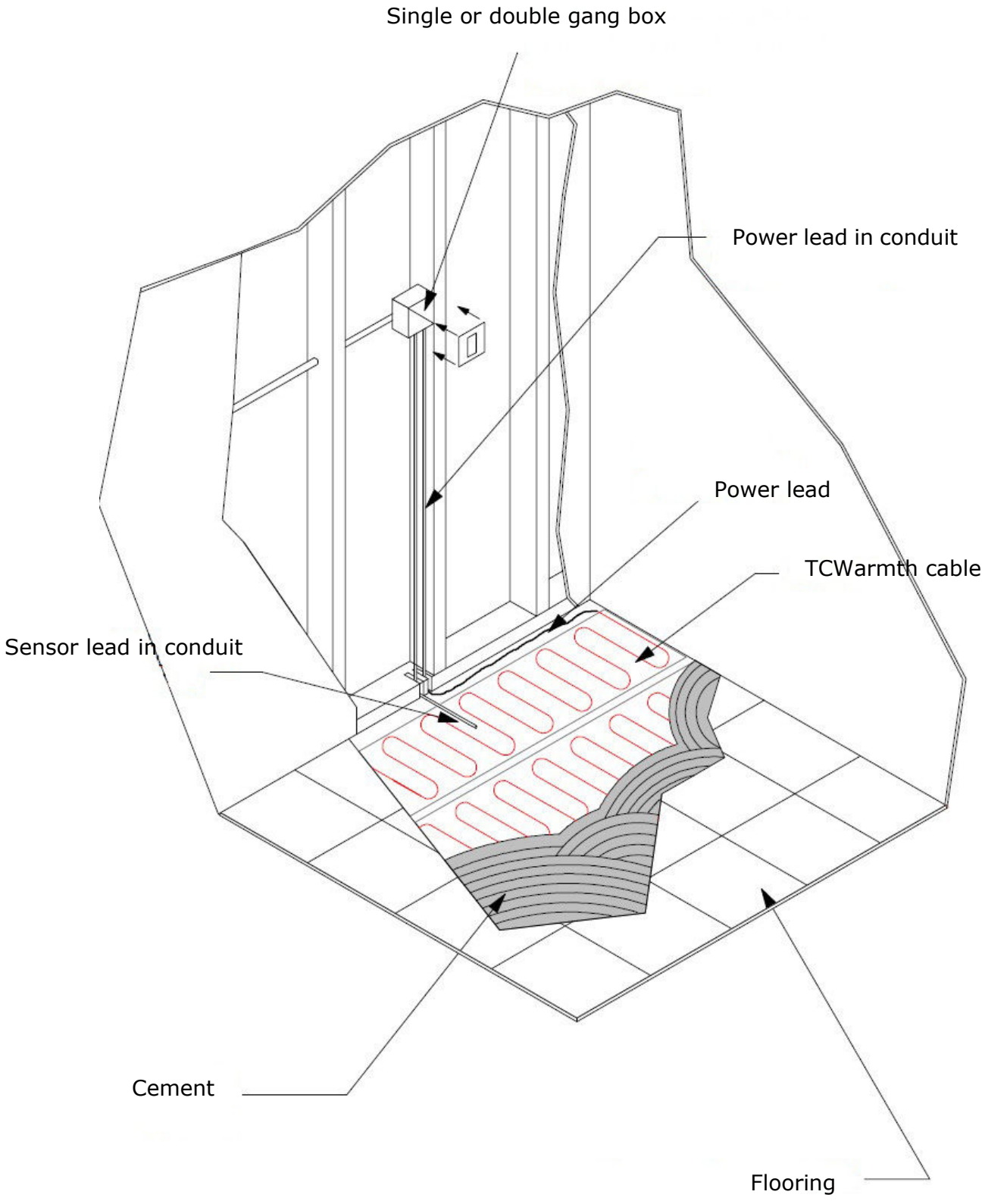
This warranty gives you specific legal rights and you may also have some legal rights which may vary from state to state or province to province. Warmth Technology Inc. hereby disclaims, and it is as a condition of the sale, that there are no implied warranties. Some states and provinces do not allow limitations on an implied warranty so the above limitation may not apply to you.

Warmth Technology Inc. **www.warmthtech.ca** **info@warmthtech.ca**
Address: 5265 Steeles Ave. W, North York, ON, M9L 2W2 CANADA
TEL: 289-622-1504

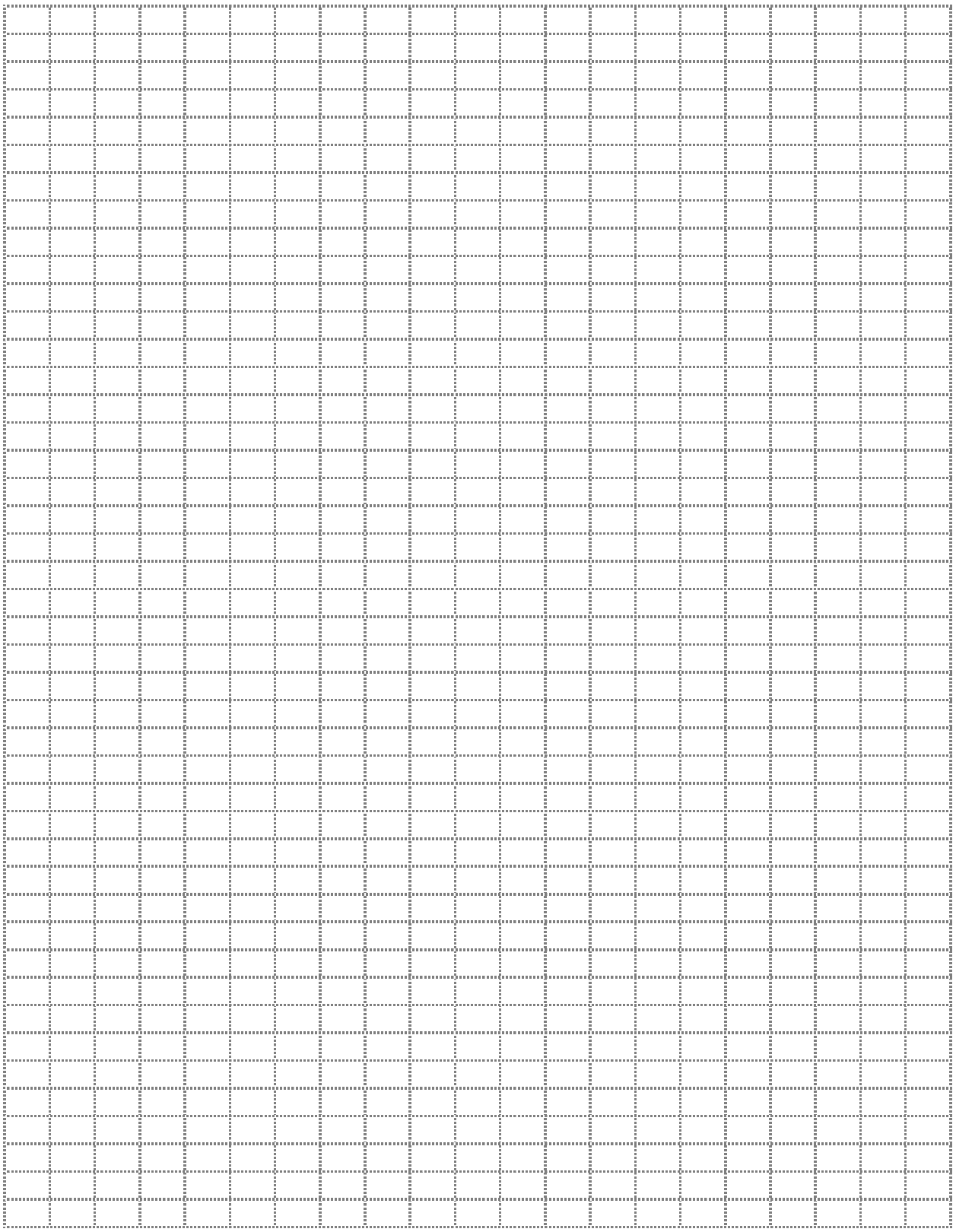
APPENDIX A: **Typical Electrical Wiring**



APPENDIX B: **Wall Wiring Diagram**



Floor Layout



Warmth Technology Inc. 5265 Steeles Ave. W, North York, ON, M9L 2W2•Tel:289 622 1504•info@warmthtech.ca•www.warmthtech.ca

WARRANTY CARD
Electric Floor Heating Cable

Cable Catalog Number			
Batch Date		**Power (Watts)**	
Volts		**Coverage Area(ft²)**	

Date of Purchase		**Supplier Name**	

Date of Installation	
Address of Installation	

	Insulation Resistance Test	**Heating Cable Resistance Test**	**Sensor Resistance Test**
Out of Box			
After Installation- Before Final Surface			
After Thin-Set Cement or Self-Leveler Application			
After Final Installation			

Electrician Details

Name	
Signature	

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