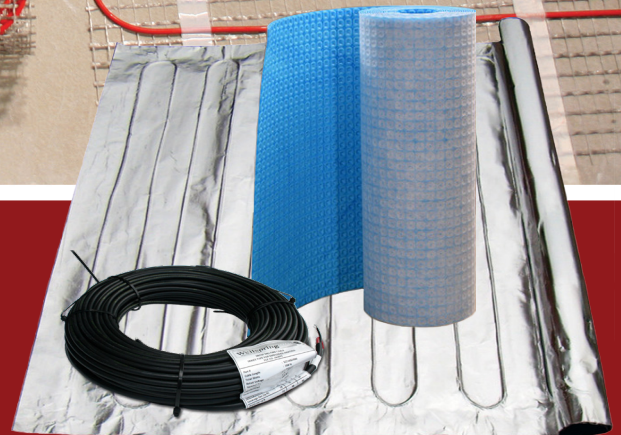
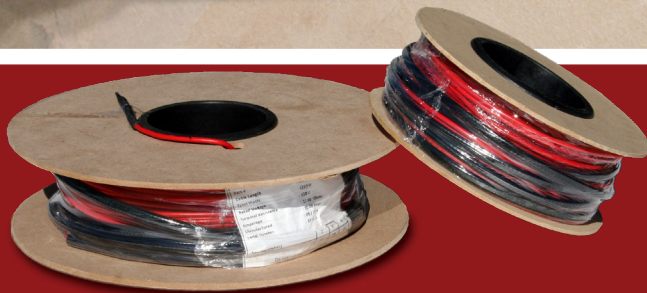
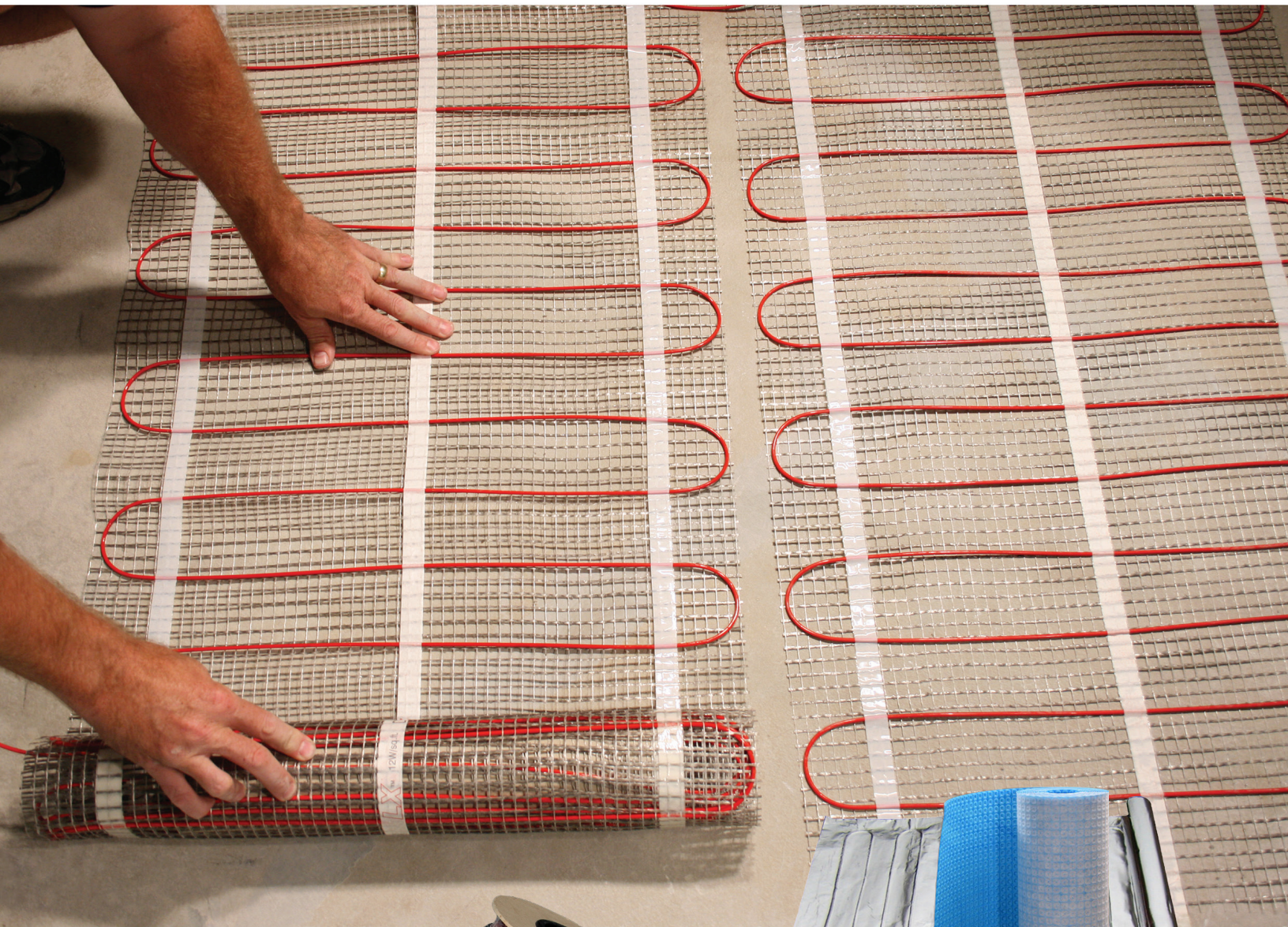


# Floor Heating

## RADIANT FLOOR HEATING SYSTEMS





# ProLine

RADIANT HEAT SOLUTIONS  
Radiant Floor Heating Systems



## ProLine Floor Heating Cable and Mats

ProLine Radiant's electric floor heating system is one of the most popular and durable floor heating solutions on the market. Available pre-spaced in mats with an adhesive backing, or on spools, the versatile heat cable is effective for virtually all types of floor surfaces, including tile, marble, slate, laminates, and hardwood.

### Features Include:

- Single-point connection
- Twin-conductor cable
- UL listed for safe installation
- Flexible installation (easy to customize)
- Durable construction
- 25-year warranty

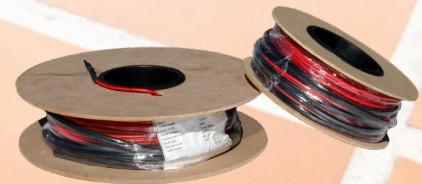


### ProLine Radiant Floor Heating Mat

The ProLine floor warming system includes a heating cable that is pre-spaced on an adhesive backed fiberglass mesh that allows for quick, simple roll out installation.

### ProLine Radiant Floor Heating Cable

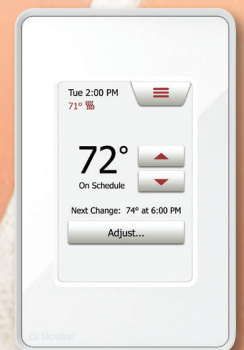
Available off the spool, the ProLine floor warming cable includes heat cable with a 10-foot cold lead.



### Floor Heating Cable Specifications

Cable construction	Twin conductor
Rated voltage	120 V, 240 V
Output (cables)	12W/ft. <sup>2</sup> (130W/m <sup>2</sup> )±10% (at recommended spacing)
Output (mats)	12W/ft. <sup>2</sup> (130W/m <sup>2</sup> )±10%
Recommended spacing	3-inches (76.2 mm)
Bending radius	1-inch (25.4 mm)
Cable diameter	1/8 to 1/6-inch (3.2 mm-4.2 mm)
Conductor insulation	Fluoropolymer
Outer insulation	High temperature PVC
Max. ambient temperature	104°F (40°C)
Min. installation temperature	40°F (5°C)
Cold lead	2-wire 16 AWG plus ground braid; 10 feet (3 m) length

All of the ProLine floor heating systems offer you a choice of technologically advanced thermostats.

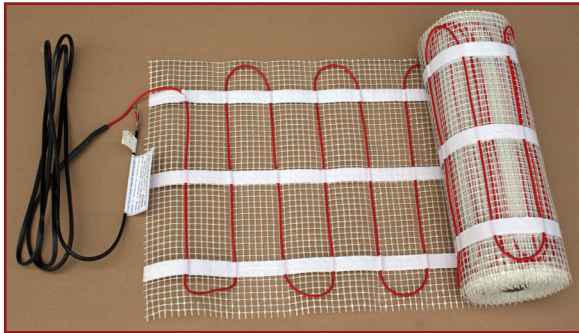


# PROLINE FLOOR HEATING ORDERING INFORMATION

The most commonly ordered floor heating cable sizes are listed below.

To order additional sizes and voltages, please contact a ProLine representative at 866.676.9276.

## ProLine Heat Cable in Mats



## ProLine Heat Cable on Spools



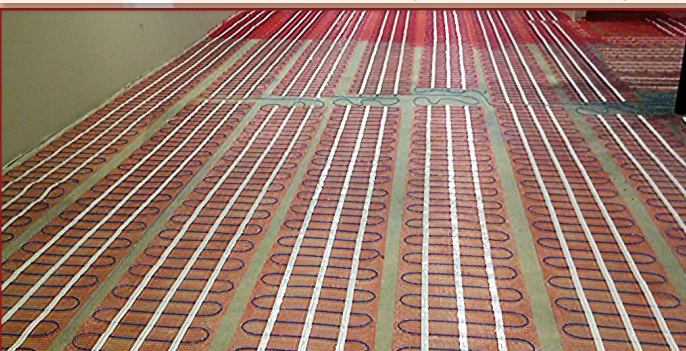
### 120 Volt Mat

Item Number	Heated Area (Sq. ft.)	Mat Dimensions (Feet)	Watts (12 W/Sq. ft.)	Amps	Ohms
TM1010	10	1.5 x 6.7	120	1.0	120.0
TM1020	20	1.5 x 13.3	240	2.0	60.0
TM1030	30	1.5 x 20.0	360	3.0	40.0
TM1040	40	1.5 x 26.7	480	4.0	30.0
TM1050	50	1.5 x 33.3	600	5.0	24.0
TM1060	60	1.5 x 40.0	720	6.0	20.0
TM1070	70	1.5 x 46.7	840	7.0	17.1
TM1080	80	1.5 x 53.3	960	8.0	15.0

### 240 Volt Mat

Item Number	Heated Area (Sq. ft.)	Mat Dimensions (Feet)	Watts (12 W/Sq. ft.)	Amps	Ohms
TM2010	10	1.5 x 6.7	120	0.5	480.0
TM2020	20	1.5 x 13.3	240	1.0	240.0
TM2030	30	1.5 x 20.0	360	1.5	160.0
TM2040	40	1.5 x 26.7	480	2.0	120.0
TM2050	50	1.5 x 33.3	600	2.5	96.0
TM2060	60	1.5 x 40.0	720	3.0	80.0
TM2070	70	1.5 x 46.7	840	3.5	68.6
TM2080	80	1.5 x 53.3	960	4.0	60.0
TM2090	90	1.5 x 60.0	1080	4.5	53.3
TM2100	100	1.5 x 66.7	1200	5.0	48.0
TM2120	120	1.5 x 80.0	1440	6.0	40.0

**WARRANTY INFORMATION: 25-year limited warranty.**



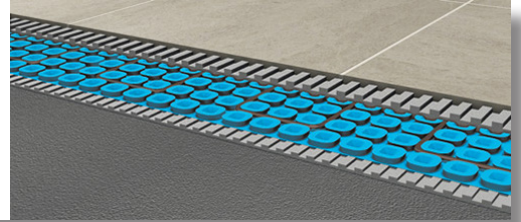
### 120 Volt Cable

Item Number	Length (Feet)	Approximate Heat Coverage (Square feet)			Watts	Amps	Ohms
		2-inch spacing	Standard 3-inch spacing	4-inch spacing			
TC10120	38.9	6	10	13	120	1.0	120.0
TC10240	77.8	13	19	26	240	2.0	60.0
TC10360	116.7	19	29	39	360	3.0	40.0
TC10480	155.6	26	40	52	480	4.0	30.0
TC10600	194.5	32	49	65	600	5.0	24.0
TC10720	233.5	39	58	78	720	6.0	20.0
TC10840	272.4	45	68	91	840	7.0	17.1
TC10960	311.3	52	78	104	960	8.0	15.0
TC11210	391.7	65	98	131	1210	10.1	11.9
TC11420	461.1	77	115	154	1420	11.8	10.2

### 240 Volt Cable

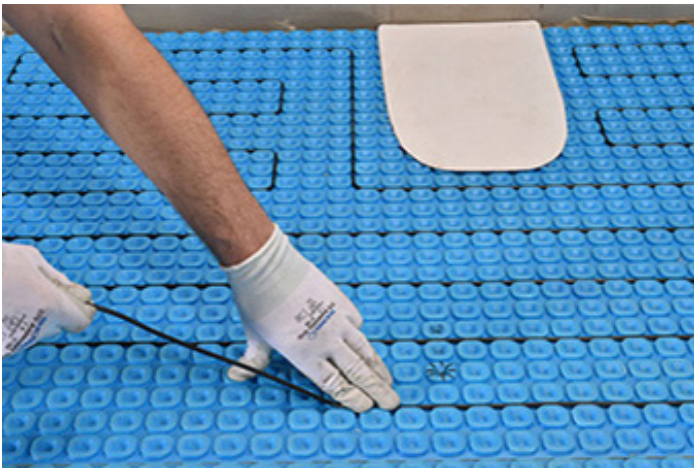
Item Number	Length (Feet)	Approximate Heat Coverage (Square feet)			Watts	Amps	Ohms
		2-inch spacing	Standard 3-inch spacing	4-inch spacing			
TC20120	38.9	6	10	13	120	0.5	480
TC20240	77.8	13	19	26	240	1.0	240
TC20360	116.7	19	29	39	360	1.5	160
TC20480	155.6	26	39	52	480	2.0	120
TC20600	194.5	32	49	65	600	2.5	96.0
TC20720	233.5	39	58	78	720	3.0	80.0
TC20840	272.4	45	68	91	840	3.5	68.6
TC20960	311.3	52	78	104	960	4.0	60.0
TC21080	350.2	58	88	117	1080	4.5	53.3
TC21200	389.1	65	97	130	1200	5.0	48.0
TC21440	466.9	78	117	156	1440	6.0	40.0
TC21580	512.0	85	128	171	1580	6.6	36.5
TC21790	580.1	97	145	193	1790	7.5	32.2
TC21930	626.8	104	157	209	1930	8.0	29.8
TC22090	678.4	113	170	226	2090	8.7	27.6
TC22280	738.8	123	185	246	2280	9.5	25.3
TC22420	783.3	131	196	261	2420	10.1	23.8
TC22630	851.8	142	213	284	2630	11.0	21.9
TC22840	922.2	154	231	307	2840	11.8	20.3





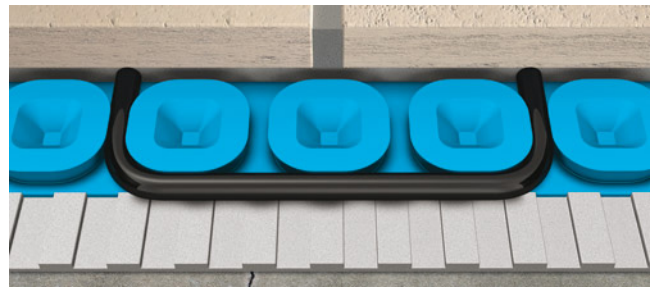
## Prodeso® Floor Heating Membrane System

The Prodeso® membrane system is an innovative uncoupling and waterproofing system for heating floors and other surfaces without movement or expansion joints in the screed. The membrane comes in rolls and is laid out directly over the subfloor before the flooring surface is installed. The membrane features pre-engineered channels for the heat cable to be routed, providing accurate spacing and easy installation.



*ProLine heat cable being installed in the channels of the Prodeso membrane.*

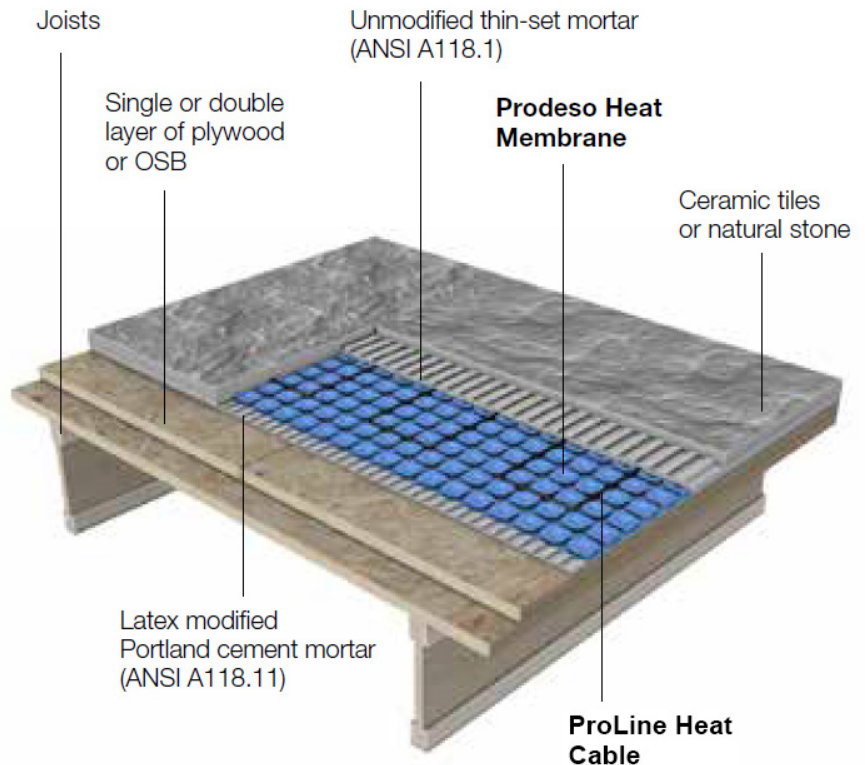
The power lead is a thin flat two-core flexible cord, consisting of two insulated conductors with a metal sheath and an outer sheath. The heating element is connected to a power-supply cable that exits the laminate mat from one corner. It is available in predetermined lengths with cold tail, prefabricated and tested in a carefully controlled factory environment.



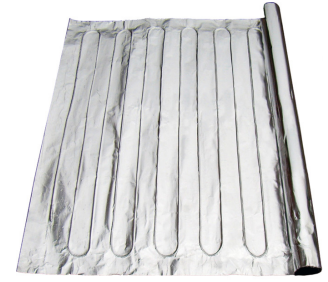
*Thin set, the Prodeso membrane and heat cable under tile.*

The Prodeso system can dramatically reduce installation times. After the membrane is laid out, ProLine heat cable is installed in the pre-engineered channels and the floor surface can then be installed over the membrane and cable. The membrane is versatile and can be used on virtually all types of indoor and outdoor applications. The Prodeso system is safe under all conditions and weather, and can be used to

heat a wide variety of floor surfaces. It even waterproofs the substrate in the case of overlaying on cracked or imperfectly cured floors with a risk of vapor stress. The flexible Prodeso floor heating membrane results in minimal floor buildup of less than ¼-inch.



# FoilHeat



## ProLine Radiant FoilHeat™ Floor Warming System

FoilHeat™ is an ultra thin electric radiant floor heating system primarily for use under carpet, laminate, engineered wood and other floating floors. Some benefits of using FoilHeat include ease of installation, rapid response time, and uniform heating of floor surfaces. The mats consist of thin fluoropolymer insulated heating cable that is sandwiched between two layers of specially reinforced aluminum foil.

### Heated Carpet and Laminate Flooring

ProLine Radiant's FoilHeat cut-and-turn floor heating mat is a unique electric radiant floor heating system that is designed for use under carpet, laminate, engineered wood and other floating floors. The FoilHeat mats can be cut and shaped on site to meet the specific requirements of the project (see photo below). The efficient floor heating system is ideal for heating any size or shape room, from basements and bedrooms to commercial offices, and more.

### Specifications

Power	Available in 120 V and 240 V
Output rating	12 W/ft. <sup>2</sup>
Thickness	1/8 inch (3 mm)
Cable spacing	2 inches (50 mm)
Cold lead	10 feet (3.0 meters)
Connections	2 conductor with ground
Inner insulation	Advanced fluoropolymers



FoilHeat mats can be easily cut on site. (Depending on your heating requirement, FoilHeat is available in 120 and 240 volts at 12 watts per square feet.)

### Features and Benefits

- Simple "roll out" installation
- Installs between the insulation pad and the floor
- There is virtually no floor buildup because of the grounded, flat aluminum
- No thin-set is required
- The aluminum construction efficiently distributes heat quickly and evenly
- System is completely grounded and safe
- Watertight (Heated carpet floors can be steam cleaned.)
- UL approved
- 12 watts per square foot (41 BTUs per square foot)
- 5-year manufacturer warranty

NOTE: Any overlay must not exceed an R-value of 1.0.

## FOILHEAT ORDERING INFORMATION

All FoilHeat Mats are 20-inches wide

### 120 V Sizing Guide (12 watts / sq. ft.)

Heated Area (Sq. ft.)	Part Number	Length (feet)	Width (inches)	Wattage (W)	Amps (A)
10	LM1010	6	20	120	1.0
25	LM1025	15	20	300	2.5
50	LM1050	30	20	600	5.0
70	LM1070	42	20	840	7.0

### 240 V Sizing Guide (12 watts / sq.ft.)

Heated Area (Sq. ft.)	Part Number	Length (feet)	Width (inches)	Wattage (W)	Amps (A)
25	LM2025	15	20	300	1.25
50	LM2050	30	20	600	2.50
95	LM2095	57	20	1140	4.75
140	LM2140	84	20	1680	7.00

\* For other sizes, please contact ProLine.



# ProLine SLAB/STORAGE

## Floor Heating Systems



### Floor Heating Cable for Concrete Slabs

ProLine Slab/Storage floor heating cable is designed for installation in new concrete slab applications. The heat cable is tied directly to the rebar and embedded at least 2-inches below the surface. The thermal heating cable efficiently uses the concrete slab to store and distribute heat evenly throughout its intended area. The ProLine heat cable is affordable and can be installed commercially or in residences to provide radiant heating for virtually any type of flooring, including decorative concrete, hardwood, carpet, laminate and ceramic tile, resulting in luxurious warmth for any home or business.

#### Floor Heating Applications

ProLine Slab/Storage heat cable is the premier floor heating solution for in-slab applications and decorative concrete of both custom residential and large commercial projects. The radiant floor heating system can efficiently provide comfortable heat for virtually any type of radiant floor heating application, ranging from decorative concrete to hardwood, carpet, laminates, and ceramic tile.

The Slab/Storage radiant floor heating system offers maintenance-free operation, is easy to install and features a comprehensive 10-year manufacturer warranty. Because the Slab/Storage heat cable is waterproof, it is safe for use in both wet and dry applications, including tiled shower and bathroom floors.

#### Decorative Concrete

Slab/Storage heat cable has proven to be perfectly suited for heating decorative concrete floors. Designed to withstand the stress of heavy concrete pours, ProLine Slab/Storage heat cable safely heats decorative and stained concrete floors without affecting the luster of colors over time. The reliability of the slab heating system has made it a favorite among professionals specializing in concrete floor installations. Slab/Storage Heat features rapid response times and utilizes the concrete slab to store and distribute heat, maximizing the efficiency of the system.

#### Versatile and Easy to Install

The Slab/Storage floor heating system is easy to customize and install in any size or shape of room. While it can be installed under any type of floor, the cable is required to be embedded in at least ½-inch of concrete or mortar.

#### Features and Benefits

- Single-point connection simplifies installation
- Safe for use in wet and dry applications
- For commercial and residential
- Save money by heating during “off-peak” hours
- Durable construction
- Flexible and easy to install
- Can be installed in concrete slab under virtually all floor types. (Ideal for heating decorative concrete.)
- 10-year manufacturer warranty



*Slab/Storage heating cable is durable, versatile, and easy to install. ProLine Slab/Storage heat's proven track record is one reason why it's a favorite among professional builders.*





## Interior Radiant Heat Controls

The ProLine Radiant electronic thermostats are specifically designed to control electric radiant floor heating systems for maximum comfort and minimum power consumption. Developed for the modern home, the programmable thermostat features a large back-lit display and simple user interface. The system temperature is controlled by an external or built-in floor sensor.

Each thermostat includes an integrated Ground Fault Circuit Interrupter (GFCI, Class A). The thermostat is an electronic on/off thermostat for controlling the temperature using a sensor placed externally. The heat output is switched on and off with a difference of only 0.7°F (0.4°C).

### Adjustable Temperature Offset

The setpoint can be adjusted to match the actual floor temperature. This ensures a 100 percent accurate measurement and control of your underfloor heating system.

The thermostat can be configured for control of the floor temperature and regulator without a sensor. The advanced thermostat is compatible with existing floor sensors by means of a temperature setting, making it the best thermostat for renovation purposes.

### Temperature Scale and Limitation

The floor temperature scale can be adjusted within the temperature range of +41°+104°F. The thermostat also features a maximum temperature function to protect wood floors and minimum temperature functions for comfort. Designed for ease of use and superior performance, the thermostat and GFCI are dual voltage models suitable for 120/240V, 50/60 Hz power supplies.

### General Thermostat Specifications

Functions	On/Off control, easy-to-read digital display, 7-day programmable
Supply voltage	120/240 V ±15%, 50/60 Hz
Load	15A maximum (resistive load)
Power	1.800 W at 120 VAC / 3.600 W at 240 VAC
Temperature control range	40 to 104°F (5 to 40°C)
Ambient temperature range	32 to 104°F (0 to 40°C)
Floor temperature sensor	2-wire, 10-foot lead wire
Floor sensor type	NTC (12 KΩ) 10 ft. (3 meters)
GFCI	Class A (5 mA trip level)
On/Off differential	0.7°F (0.4°C)
Regulation principle	PWM / PI
Housing	NEMA 2 (IP21)
Dimensions (H/W/D)	4.8, 3.0, 1.0 inch (123, 75, 25 mm)

Floor Heating

## FLOOR HEATING CONTROLS AND ACCESSORIES ORDERING INFORMATION

### Floor Heating Thermostats

Item Code	Description
PL-dual-99	Programmable thermostat with air sensor (and floor temperature limiter)
PL-dual-99T	Programmable touch screen thermostat
PL-dual-99TW	Wi-Fi enabled touch screen thermostat
PL-4991	Non-programmable thermostat with floor sensor
PL-4000	Power module with GFCI

### Floor Heating Accessories

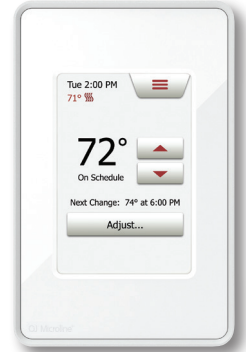
Item Code	Description
PL-RKTC	Repair kit floor (includes crimp connectors, repair wire, heat shrink tubes)
PL-RKFH	Repair kit foil (includes crimp connectors, repair wire, heat shrink tubes)
PL-Buzzer	Little Buzzer - continuity alarm
TC-Strap	Plastic cable strapping, 1-foot increments
PL-Sensor	Replacement floor sensor for thermostat

# ProLine Floor Heating Thermostats

## WiFi Touch Screen Programmable Thermostat (PL-dual-99TW)

The touch thermostat for electric floor heating features a sleek design and intuitive control for easy installation. This advanced programmable thermostat\* delivers optimal comfort and minimum energy consumption. Includes floor sensor with 10-foot (3-meter) cable.

- Universal compatibility with existing floor heating sensors
- New 'Easy Scheduling' method and simple on-the-fly changes
- 3.5-inch color screen with easy interactive touch control
- Track power consumption and easily save to a PC
- Thermostat settings can be exported to web page for support
- Suitable for tile, stone, laminate, concrete and wooden floors
- Power Supply: 120-240 VAC 50/60 Hz; 15A maximum resistive load
- Class A (5mA trip level) GFCI



## LED WiFi Programmable Thermostat (PL-LED-99W)

The programmable thermostat with dual sensors is an "all-in-one" programmable thermostat for electric underfloor heating control where optimal comfort temperature and minimum energy consumption is required.

- Bluetooth®, WiFi and Cloud connected
- Voice control compatible with Amazon Alexa and with Google Assistant-enabled devices
- Easy and intuitive setup by a wizard
- Capacitive touch allows direct control of thermostat
- Simple on-thermostat control. Adjust set-point, change operation mode, turn on/off
- Display readouts of temperature, set point, time, heating status, errors, and WiFi status
- Regionalization (language, unit, time, and date)
- Allows up to 10 different schedules and overrides (manual mode, hold for X hours, vacation mode, frost protection, and eco mode)
- LED display. Light intensity is increased during use, and dimmed or turned off when not being used.
- Adaptive function, open window function, application type, sensor adaption, user lock, and calibration
- Fast, secure connection and operation, using TLS 1.3 encrypted data
- GFCI protected (with test button)



## PRO Digital/Non-programmable Thermostat with Floor Sensor (PL-4991)

Optimal comfort in controlling electrical underfloor heating. Built on efficiency, intuitive operation and with a stylish design. Includes floor sensor with 10-foot (3-meter) cable.

- Simple user interface and thoughtful installation design / Easy to use
- Screw terminals for safe and easy installation
- Multi voltage: 120-240 VAC (includes 208 VAC)
- Output relay: 15A
- Large back-lit display for easy reading
- Class A GFCI: suitable for wet room installation



## PRO Power Module Relay (PL-4000)

For large floor heating applications, the Power Module Relay can be extended with additional Power Relay Modules. The PRO Relay module features a built-in Class A GFCI and increases output by 15 amps per module. Output can thus be increased by 15A per module.

- Easy to use
- Screw terminals for safe and easy installation
- For use only with the CT Programmable Thermostat
- Multi voltage: 120-240 VAC (includes 208 VAC)
- Output relay: 15A
- Class A GFCI: suitable for wet room installation

