

ProLine

RADIANT HEAT SOLUTIONS

PRODUCT CATALOG



ProLine Radiant Product Catalog

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ProLine Radiant products have been featured on
the DIY Network and in the Wall Street Journal.





*The Trusted Radiant
Heat Provider
for Construction
Professionals.*

About ProLine Radiant

General Information - Products and Services

ProLine Radiant is a leading international provider of interior and exterior radiant heat solutions. Our wide selection of products and unsurpassed customer services have established ProLine as the trusted radiant heat solutions provider. From large commercial applications to custom residential projects, ProLine Radiant has the top products, services and professional staff to provide the ideal radiant heat solution.

ProLine Solutions Include:

- Industrial, Commercial and Residential Solutions
- Snow and Ice Melting
- Radiant Floor Heating
- Roof Deicing and Gutter Trace
- Pipe Tracing
- System Design and Engineering
- Installation Support and Training
- Electric and Hydronic Radiant Solutions

ProLine Radiant includes complete engineering and design services with each system. You'll find our professional staff to be extremely knowledgeable, friendly, and responsive. From project inception to completion, we will work with you to ensure that all your project needs are met.

The Complete Solution and Best Value

ProLine Radiant offers more than the latest industry-leading radiant heat products. We partner with you to install the best radiant heat system for your needs and budget. In addition to top quality products, ProLine includes unmatched system design/layout and engineering services, as well as expert installation training and support.

Our superior customer and installation services are why ProLine has gained its reputation as a trusted provider of radiant heat solutions. When it comes to the complete radiant heat solution, you won't find a wider selection of proven products or a more knowledgeable, helpful and friendly staff.

"The staff at ProLine was by far the most professional, responsive and knowledgeable of all those with whom I dealt."

Benson R. - TileMaster (Business Owner)

ProLine makes the process of selecting, purchasing and installing a radiant heat system as seamless as possible.

Our expertise and superior service are just some of the reasons why construction professionals and homeowners alike consistently choose ProLine.

*ProLine is with you every step of the way,
from initial consultation and project
analysis to purchase, system design
and installation.*

Summary of Benefits

Call a radiant heat expert at ProLine for a free consultation. Or visit ProLine Radiant online (www.GBRadiantHeat.com) and then call us toll free at 508.379.6038 to learn more about your radiant heat options.

- Free Consultation and Analysis with an Experienced, Unbiased Radiant Heat Expert
- Wide Selection of Proven Products
- Complete System Design (AutoCAD) and Engineering Services
- Industry Leading Electric and Hydronic Radiant Heating Solutions
- Post-sales Technical Support
- Expert Installation Support
- Professional Training
- Free Quote Services

Contact your local wholesaler. If they don't carry ProLine products, be sure to ask them to!

To receive a radiant heat quote, or design, contact your local wholesaler or visit www.GBRadiantHeat.com. Or for more information, call ProLine Radiant at 508-379-6038 today.

To submit your project for a design/quote, call 508-379-6038



*Snow Melting, Roof Deicing,
Pipe Tracing, and
Floor Heating Solutions*

Project Photos



ProLine roof deicing heat cable installed in commercial gutter melt application.



ProLine floor heating mats.



ProLine heated driveway.



Heated tire tracks in asphalt driveway.



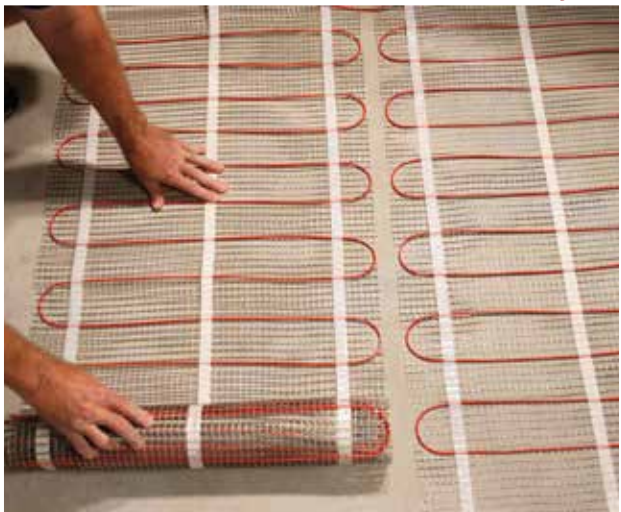
ProLine low-voltage roof deicing system heating roof valley and edge.



ProLine heat cable embedded in city sidewalks.



Roof deicing system heating roof edges.



ProLine floor heating mats being installed.



ProLine snowmelt system installed in parking lot ramp.



Pipe tracing system installed.



ProLine snow melting system installed in paver driveway.

Professional System Design, Installation Training, and Technical Support Services



Industry Leading Customer Services

What truly differentiates ProLine Radiant from the competition is its customer service. In addition to its experienced design team providing detailed AutoCAD layouts, ProLine offers free installation training courses with certificates of completion. And should you need, ProLine electricians and designers are also on hand to provide technical support during the installation process. We work with you every step of the way to make the process of installing a radiant heat system as easy as possible.

Professional Design Services

ProLine custom designs each radiant heat system to ensure it meets each project's specific needs. The AutoCAD layouts contain all the specs and information necessary, so you'll know all the technical information, including load calculations, breaker sizes, number of breakers, etc., prior to any installation taking place.

ProLine Radiant Training Services

A radiant heating system is only as good as the installation, which is why ProLine provides a valuable installation training program. ProLine's professional training services include courses on radiant snowmelt, roof deicing and floor heating system installation.

Installers who successfully complete the training receive a dated certificate from ProLine, documenting their knowhow in radiant heat installation. Subsequently, ProLine can recommend your business if a customer in your area is interested in installing a radiant heat system.

Installation Support Services

ProLine Radiant's installation support services further distinguish it from other manufacturers and wholesale distributors. ProLine Radiant provides a dedicated staff of experts to assist you throughout the installation process if you need. This valuable resource gives your business a wealth of expertise to draw from and helps to ensure timely, successful installations - and repeat business.

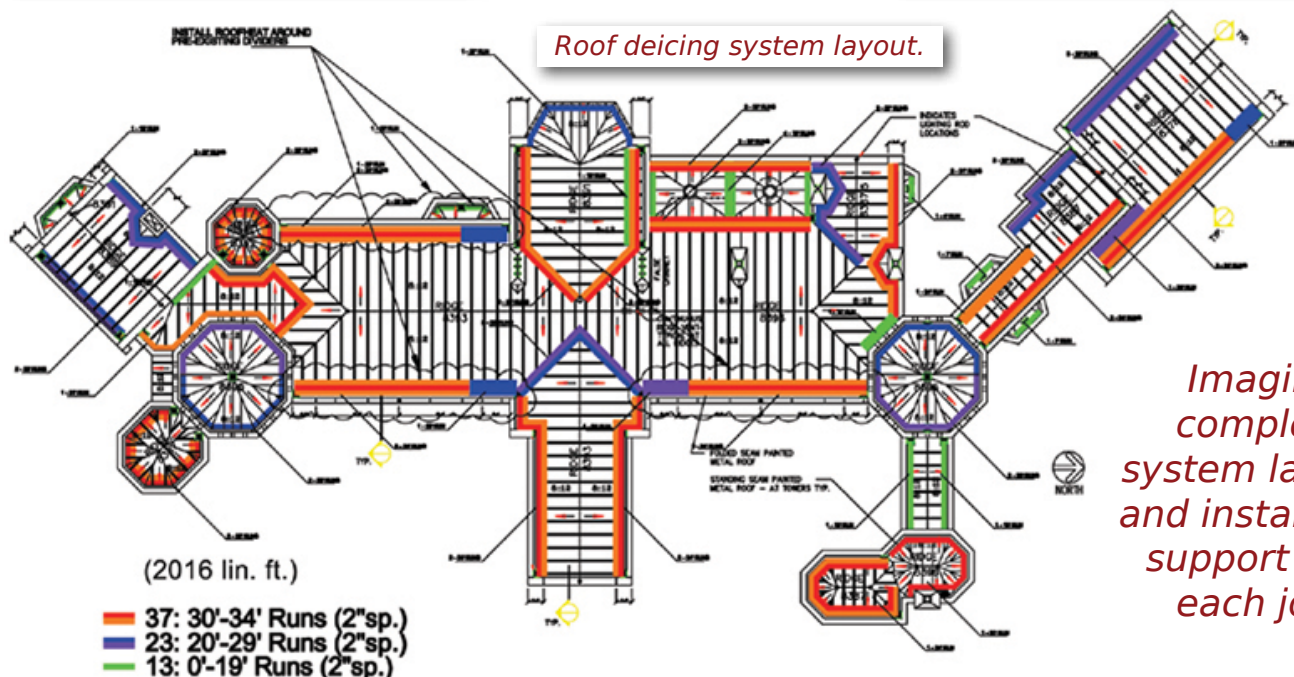
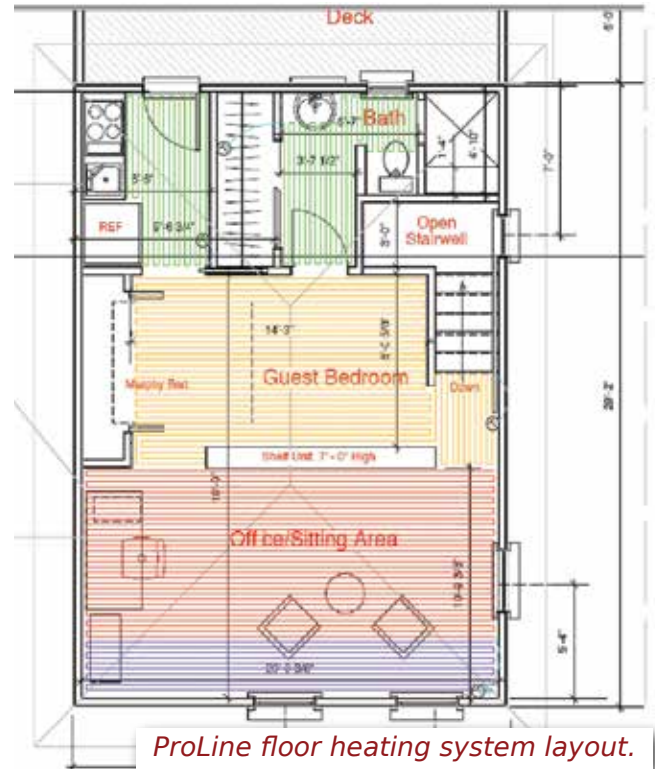


ProLine offers free installation training as well as professional design/layout services and installation support.



When you work with ProLine, you are partnering with experienced professionals who stand beside you throughout the purchase, design, and installation process. Our goal is to make the installation of radiant heat as easy as possible for you and ensure the success of your business. Enhance your bottom line with peace of mind by utilizing the trusted services and expertise of seasoned professionals whose goal is your success.

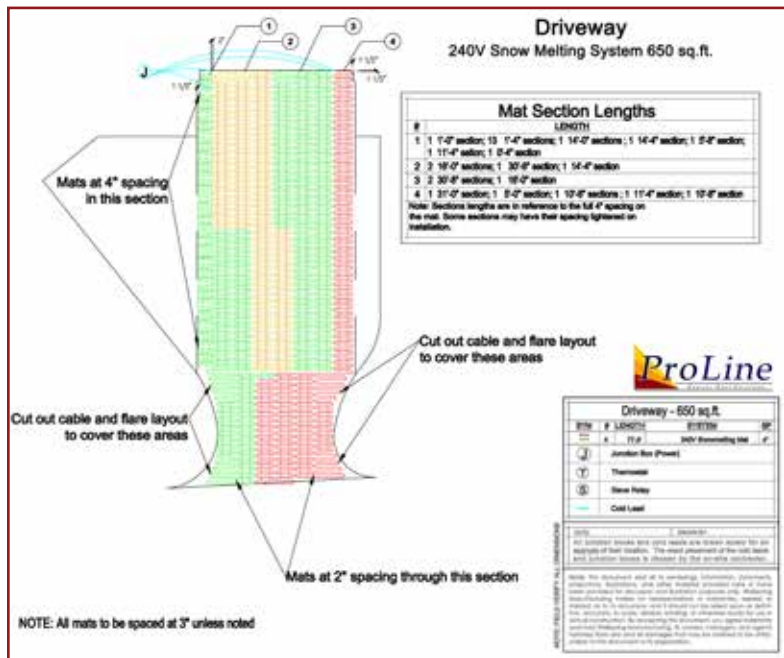
Professional Design Services



Imagine
complete
system layouts
and installation
support with
each job!

Heated Driveway Design and Installation

AutoCAD Design and Installation Photos of a Heated Paver Driveway



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Swansea, MA 02777
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Snow Melting

RADIANT SNOWMELT SYSTEMS





Fully automated, maintenance-free ProLine snow melting systems have proven to be the optimum solution for heating commercial parking ramps, driveways, sidewalks, loading docks and more. Versatile and durable, ProLine heat cable is designed to withstand the stress of heavy concrete pours and brick and stone paver applications as well as the extreme temperatures of hot asphalt installations. The snow melting cable is available on the spool or pre-spaced in mats for easy “roll-out” installation. The performance and reliability of electric snowmelt systems have made ProLine Radiant a favorite among wholesalers and professional builders alike.

Features Include:

- Available on the spool or pre-spaced in mats.
- Single-point connection simplifies installation.
- Twin-conductor cable.
- Flexible installation; easy to customize.
- Durable and versatile - Designed for use in concrete, under pavers, and hot asphalt applications.
- Silent, efficient and safe.
- Maintenance-free operation.
- All mats heat 2-feet wide. Power leads are 16.4 feet in length.
- 10-year limited warranty against manufacturing defects.

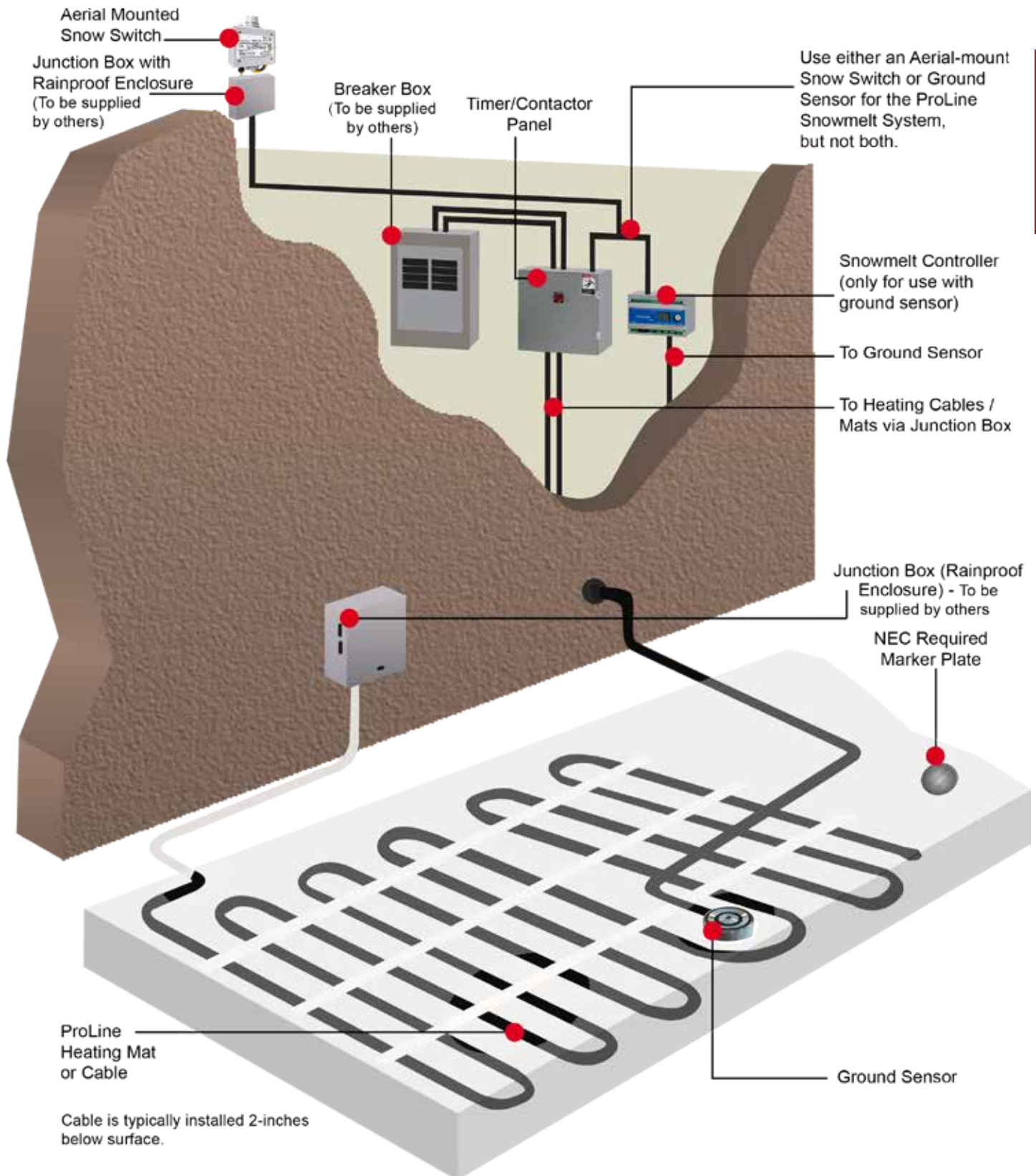


ProLine Mats and Cables Specifications

Cable construction	Twin conductor
Rated voltage	120-600 V (For 120, 208, 277, 600 V, please call.)
Output (mats)	37W/ft. ² and 50W/ft. ²
Output (cables)	12W/ft. (40W/m) with cable, 24-70W/ft. ²
Cold lead	16.4 feet (5.0 m) Longer cold leads available on request.
Bending radius	Minimum 2 inches, (51 mm)
Cable diameter	¼ inches (7 mm)
Conductor insulation	Fluoropolymer
Metal sheath	Copper
Outer sheath	Polyolefin
Max. external jacket asphalt temperature *	220°F (105°C) *[460°F (240°C) for up to 10 minutes]
Max. external jacket temp.	158°F (70°C)
Max. conductor insulation temperature	302°F (150°C) Concrete and pavers
Min. installation temp.	5°F (-15°C)



ProLine Snow Melting System Overview





Exterior Radiant Heat Controls

ProLine Offers Contactor Panels with GFEP

In keeping with its commitment to provide professional builders with the best products, service and convenience, ProLine Radiant offers GFEP (ground fault equipment protection) breaker panels with its snowmelt systems, which can save installers time and money.

Designed for radiant snow and ice melting applications, the ProLine Radiant contactor panel with GFEP simplifies your installation and minimizes costs. The UL listed panels feature a NEMA 4 enclosure, terminal connection block, two or four 3-pole contactors, and wiring diagram. The panel should be used in conjunction with the in-ground snow sensor/controller or the aerial-mount snow switch (see pages 13-15).

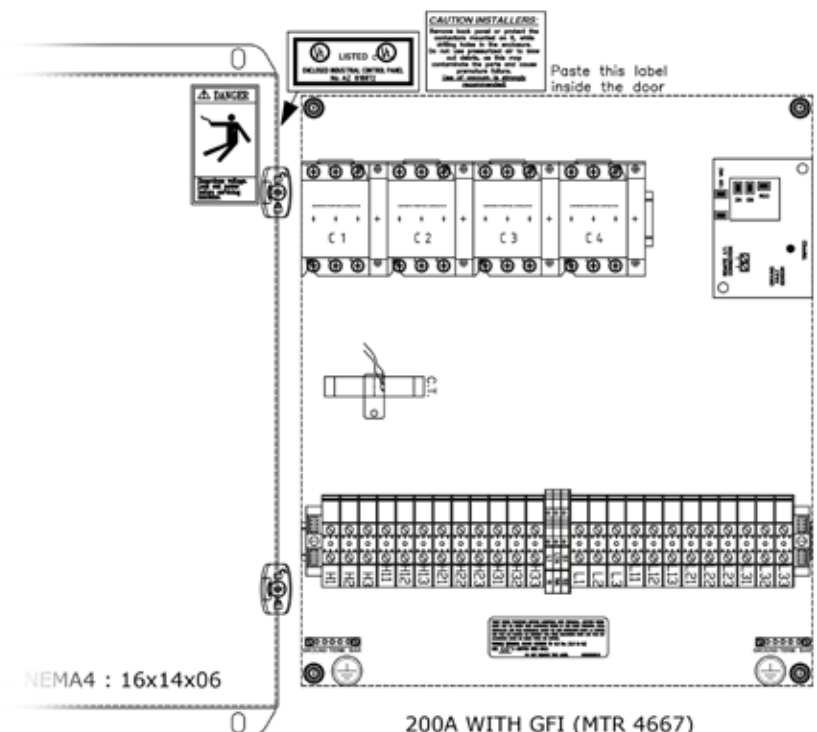
NEMA 4X contactor panel available upon request.

Features and Benefits

- NEMA 4, UL listed panel box
- Low cost
- Easy to install
- Integrated 30mA GFEP (optional)
- LED trip indicator (internal)
- LED "heat on" indicator light
- Pre-wired terminal connections
- 120 V on/off remote heat indicator
- 2-year warranty



Contactor panel front.





Exterior Radiant Heat Controls

Snowmelt System Controller

The ProLine Radiant snowmelt control units are NEMA 1, wall-mounted control panels. The approximate size of the control unit is only 6 x 3½ inches. It is even possible to control the unit from an external signal (day/week timer, GSM-module or other signal source). The controller also features manual override capability, allowing you to activate the system to melt snow drifts or ice that has formed due to wind or shade.



ProLine Control Unit

The ProLine Radiant controller is designed for ice and snow melting in gutters and ground areas. Using readings from temperature and moisture sensors, the controller ensures economical control of power consumptions when keeping outdoor areas and roofs free of ice and snow.

Despite the compact control unit's advanced technology, superior performance and ease of use, it also represents a breakthrough in that it is significantly more affordable than most other industry

controllers. The unit provides maintenance-free, energy-efficient, UL listed snow melting for all types of residential and commercial applications.

ProLine Snowmelt Controller Technical Data

Supply voltage	120/230 V ±10%, 50-60 Hz
Temperature range	32°F to 122°F (0 to 5°C)
Working range	-4°F to 41°F (-20 to 5°C)
Built-in timer for manual snow melting / after run	1-6 hours
Output relay	3 x 16A potential free relay
Two zone application	Output is 2 x 16A potential free relay
Water-based system	Controlling a 3 or 4 way valve, primary pump, secondary pump.
Display	Graphic and with back light
Ambient temperature	32°F to 122°F (0°-50°C)
Housing (including cover)	IP20
Weight	1.09 lbs. (495 g)
Dimensions (excluding cover)	H: 3.5" W: 6.1" D: 1.7" (90 mm x 156 mm x 45 mm)
Dimensions (including cover)	H: 6.7" W: 6.4" D: 1.7" (170 mm x 162 mm 45 mm)
LEDs indicate the functions: ON/green; ERROR/red	Supply voltage to the thermostat; fault indication

Technical Data for ProLine In-Ground Sensors

Detecting	Moisture and temperature
Mounting	Any outdoor area
Housing	IP68
Ambient temperature	-4°F to 158°F (-20 to 70°C)
Cable length	33 feet (10 meters)
Dimensions	H: 1¼-2.4 inches (32 mm-60.9 mm)

Ground Sensor for Temperature and Moisture

Designed for embedding into the surface of concrete, asphalt, pavers or other outdoor surfaces, ProLine Radiant's in-ground snow sensor detects ground temperature and moisture for automated snow melting systems. The activation device only signals the controller to activate the system when the outdoor temperature is below the selected setting (usually 39°F) and snow or ice occurs on the sensor head.

The snow sensor is usable for all applications within hydronic as well as electrical radiant heating. Optimal operation is ensured because of the output control, which makes the system both effective and economical.



In-ground snow sensor (and sensor cup) for automated snow melting system.

ProLine System Activation Devices (Snow Sensors)

ProLine Radiant snowmelt systems come standard with an aerial or ground-mounted snow sensor switch. The advanced device automatically activates the ProLine snow melting system when it detects precipitation and temperatures are below a set point. The temperature is typically set at 39°F, but is adjustable from 34°F (1.1°C) to 44°F (6.6°C). Smart system compatible, the aerial sensors have several other notable features, including adjustable delay off cycle and upgradeable remote activation.



The WS-2C Aerial Snow Sensor - Designed for snow and freezing rain detection, the WS-2C aerial snow sensor sets the standard for automated radiant snowmelt systems. The snow sensor activates the snow melting system when moisture is present and the temperature reaches the set point (usually 39°F), providing fully automated, efficient snow and ice melting.

The unit is easy to install and all the electronics can be accessed by simply removing the four front cover screws.

Reliable Rain and Snow Detection
Adjustable Delay Off Cycle
Easy Installation & Full Access to Electronics
Adjustable Temp. Trigger Point (34°-44°F)
Smart "Manual On" Operates for one Delay

Full 30A @ 240 VAC Control
Field Strap for 100-120 / 200-240 VAC Operation
Selectable Low-Temperature Cutoff
Replaceable Remote Precipitation Sensor
Housed in a two-gang PVC enclosure



The WS-5C Aerial Snow Sensor - The WS-5C is essentially a WS-2C fitted with a dual 30A @ 240 VAC load control contact set. It is primarily designed for larger satellite antenna/broadcast tower deicing and pavement snow melting applications. Specifically, any job that a WS-2C can perform, a WS-5C can perform with double the load handling capability. The unit is housed in a two-gang PVC enclosure. The overall dimensions of the WS-5C are 4¾" x 7" x 2¾" (120 mm x 178 mm x 70 mm). The unit weighs 2 pounds. The user may access all electronics by removing the four front cover screws.

Reliable Rain and Snow Detection
Adjustable Delay Off Cycle
Easy Installation & Full Access to Electronics
Adjustable Temperature Trigger Point
Smart "Manual On" Operates for one Delay

Dual 30A @ 240 VAC Control
Field Strap for 100-120 / 200-240 VAC Operation
Selectable Low-Temperature Cutoff
Replaceable Remote Precipitation Sensor
Housed in a two-gang PVC enclosure



The WS-8C Aerial Snow Sensor - The WS-8C is primarily designed for gutter, downspout, and roof ice melting and small satellite antenna deicing. The totally sealed, low voltage, remote mount precipitation sensor allows the user to install the small sensor head in a downspout, the bottom of a gutter, or at the end of an antenna boom, up to 10 feet away, while keeping the main controller in a more convenient or protected location.

Reliable Rain and Snow Detection
Adjustable Delay Off Cycle
Easy Installation & Full Access to Electronics
Adjustable Temperature Trigger Point
Bright Off/On/Triggered LED Status Indicator

Full 30A @ 240 VAC Control
Field Strap for 100-120 / 200-240 VAC Operation
Safe Low-Voltage Sensor Head
Replaceable Remote Precipitation Sensor
Smart "Manual On" Operates for one Delay Cycle



The WS-AUX Control Panel - The WS-AUX control display panel is used in conjunction with a WS snow sensor controller. The sensor is typically mounted on a roof, near a gutter, or in a similarly difficult location to reach. The WS-AUX provides a method of remotely monitoring and controlling the attached sensor. The user may monitor both the operating mode and the activation state of the sensor. The user may also set the sensor to prohibit automatic operation, to automatically operate, or to manually operate one snow melting cycle, then return to automatic operation. The WS-AUX derives its power from the snow sensor and requires no batteries or AC power. With an operating temperature range of -40°F to 185°F (-40°C to +85°C) the WS-AUX is designed for use either indoors or outdoors with proper protection from the elements. The overall dimensions of the WS-AUX are 4.1"x 1.8" x 0.9" (104 mm x 45 mm x 23 mm).

ProLine Snowmelt System Activation Devices

Technical Data and Specifications

WS-2C Specifications	
Dimensions	4¾"x7"x2¾" (120 mm x 178 mm x 70 mm)
Weight	2 lbs. (0.9 Kg)
Operating temperature	-40° to 185°F (-40° to 85°C)
Enclosure rating	NEMA 3R
Supply power	100-120 VAC / 200-240 VAC Field selectable 15 W maximum
Trigger temperature	34° to 44°F (1.1° to 6.6°C) Field selectable
Delay off (sensor)	2 Minutes
Delay off (controller)	30-90 Minutes field selectable
Load contact capacity	30A @ 240 VAC / 100,000 Operations at full load
Monitor contact capacity	24 VDC/VAC 400mA 10 W Total

WS-5C Specifications	
Dimensions	4¾"x7"x2¾" (120 mm x 178 mm x 70 mm)
Weight	2 lbs. (0.9 Kg)
Operating temperature	-40° to 185°F (-40° to 85°C)
Enclosure rating	NEMA 3R
Supply power	100-120 VAC / 200-240 VAC Field selectable 15 W maximum
Trigger temperature	34° to 44°F (1.1° to 6.6°C) Field selectable
Delay off (sensor)	2 Minutes
Delay off (controller)	30-90 Minutes field selectable
Load contact capacity	2x30A @ 240 VAC / 100,000 Operations minimum at full load
Monitor contact capacity	24 VDC/VAC 400mA 10 W Total



Example of a ProLine aerial-mount snow sensor and junction box.

WS-8C Specifications	
Dimensions	4¾"x7"x2¾" (120 mm x 178 mm x 70 mm)
Weight	2 lbs. (0.9 Kg)
Operating temperature	-40° to 185°F (-40° to 85°C)
Enclosure rating	NEMA 3R
Supply power	100-120 VAC / 200-240 VAC Field selectable 15 W maximum
Trigger temperature	34° to 44°F (1.1° to 6.6°C) Field selectable
Delay off	30-90 Minutes field selectable
Load contact capacity	30A @ 240 VAC / 100,000 Operations minimum at full load

ProLine WS-AUX Snow Sensor Control/Display Panel

The WS-AUX control display panel brings control and monitoring of your snowmelt system indoors. No need to hope that the system has successfully triggered. One glance at the WS-AUX confirms it.

The WS-AUX is compatible with the WS-2C, WS-5C, and WS-8C rain/snow sensor controllers. The unit consists of an electronic printed circuit board mounted securely to a steel mounting plate. The WS-AUX weighs 2.5 ounces and fits into a standard single-gang or multi-gang electrical enclosure. Compatible self-threading mounting screws that fit both metal and plastic enclosures are included. The plate also has mounting holes for a rectangular "modular" cover plate. This allows the user to select a cover plate color and material that blends with the decor of the room.

The WS-AUX provides three push-button switches; STANDBY, AUTOMATIC, and MANUAL ON.

The respective LED indicators for each control reflect the current operating mode of the snow sensor. To save energy, the LED indicators blink periodically rather than remaining steadily illuminated. Pressing STANDBY will set the connected snow sensor to ignore snowfall and prohibit automatic operation of an attached snowmelt system. This function can be used to save energy if snow melting is not critical (i.e., driveway, sidewalk) and is not required for an extended period of time (vacation home, remote location). Pressing AUTOMATIC will set the connected snow sensor to automatically activate and control an attached snowmelt system when snow is detected.



PROLINE SNOW MELTING MATS AND CABLE ORDERING INFORMATION *

The ProLine snow melting system includes heating cable or a mat that is pre-spaced and taped into a 3- or 4-inch on-center-mat that allows for simple roll-out installation. All mats heat 2-feet wide. Power leads are 16.4 feet in length. (* The most commonly ordered snow melting cable sizes are listed below. To order 120, 208, 277, 600 V, and other size mats and cables, please contact your ProLine representative.)



Snow Melting Mats

240 Volt Mat (50 W per square foot)

Item Number	Heated Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM25052500	10	5	500	2.1	115.2
SM2501121000	20	11	1,000	4.2	57.6
SM2502722500	50	27	2,500	10.4	23.1
SM2504424000	80	44	4,000	16.7	14.4
SM2506025500	110	60	5,500	22.9	10.5



240 Volt Mat (37 W per square foot)

Item Number	Heated Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM237112750	20	11	750	3.1	76.8
SM2373022000	55	30	2,000	8.3	28.8
SM2375123500	95	51	3,500	14.6	16.5
SM2376524500	120	65	4,500	18.8	12.8
SM2378025500	150	80	5,500	22.9	10.5

480 Volt Mat (50 W per square foot)

Item Number	Heated Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM45052500	10	5	500	1.0	460.8
SM4501121000	20	11	1,000	2.1	230.4
SM4502722500	50	27	2,500	5.2	92.2
SM4504424000	80	44	4,000	8.3	57.6
SM4506025500	110	60	5,500	11.5	41.9

480 Volt Mat (37 W per square foot)

Item Number	Heated Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM437112750	20	11	750	1.6	307.2
SM4373022000	55	30	2,000	4.2	115.2
SM4375123500	95	51	3,500	7.3	65.8
SM4376524500	120	65	4,000	9.4	51.2
SM4378025500	150	80	5,500	11.5	41.9
SM4378026000	160	87	6,000	12.5	38.4

Snow Melting Cable

240 Volt Cable (37 & 50 W per square foot)

Item Number	Cable Length (Feet)	Approximate Heat Coverage (Square feet)		Watts	Amps	Ohms
		3-inch spacing (50 Watts Sq. ft.)	4-inch spacing (37 Watts Sq. ft.)			
SC262750	62	15	20	750	3.1	76.8
SC2841000	84	20	27	1,000	4.2	57.6
SC21682000	168	40	55	2,000	8.3	28.8
SC22092500	209	50	70	2,500	10.4	23.1
SC23754500	375	90	125	4,500	18.8	12.8
SC24585500	458	110	150	5,500	22.9	10.5



480 Volt Cable (37 & 50 W per square foot)

Item Number	Cable Length (Feet)	Approximate Heat Coverage (Square feet)		Watts	Amps	Ohms
		3-inch spacing (50 Watts Sq. ft.)	4-inch spacing (37 Watts Sq. ft.)			
SC443500	43	10	14	500	1.0	460.8
SC41271500	127	30	42	1,500	3.1	153.6
SC41702000	170	40	57	2,000	4.2	115.2
SC42563000	256	60	85	3,000	6.3	76.8
SC43404000	340	80	113	4,000	8.3	57.6
SC44265000	426	100	142	5,000	10.4	46.8
SC44695500	469	110	156	5,500	11.5	41.9

Snow Melting Mats for Asphalt

240 Volt (37 W per square foot)

Item Number	Heated Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SMA237112750	20	11	750	3.1	76.8
SMA2373022000	55	30	2,000	8.3	28.8
SMA2375123500	95	51	3,500	14.6	16.5
SMA2376524500	120	65	4,500	18.8	12.8
SMA2378025500	150	80	5,500	22.9	10.5



PROLINE SNOW MELTING ORDERING INFORMATION

Snow Melting Contactors/Timers

Item Code	Description	Coil Voltage	Max Amps
SCP1	Single contactor, 2P, 600V	120, 208-240	50
WS100CP	Dual contactor panel (100A)	120	100
WS200CP	Quad contactor panel (200A)	120	200
WSGFEP100	Dual contactor panel with GFEP (100A)	120	100
WSGFEP200	Quad contactor panel with GFEP (200A)	120	200

Snow Melting Controls

Item Code	Description	Voltage
WS-2C	Aerial mounted snow switch (30 Amps)	120-277
WS-5C	Aerial mounted snow switch (60 Amps)	120, 208-240
WS-8C	Aerial mounted snow switch w/remote moisture sensor (30 Amps)	120-277
WS-AUX	Auxiliary control for aerial switch	
WS-50	50 feet of interconnect cable	
WS-100	100 feet of interconnect cable	
WS-200	200 feet of interconnect cable	
WS-56	Pavement mounted snow sensor	
WS-02	Controller for pavement mounted sensor	120-277

Snow Melting Accessories

Item Code	Description
PL-RKSM	Repair kit (crimp connectors, wire, heat shrink tubes)
Warmplate	Embedded marker plate (per NEC)



Fully Automated Snow Melting Systems



28 Market St, Suite 4
Swansea, MA 02777
Phone: 508-379-6038
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Heat Trace Cable

SELF-REGULATING ROOF
AND PIPE TRACING CABLE



Why ProLine Heat Trace Cable?

ProLine self-regulating heat cable features a more flexible outer jacket and more durable carbon core than other leading brands of self-reg cable. These features provide more consistent performance, longer lifespan, and easier installation in cold temperatures.

Key Features of ProLine Self-regulating Heat Cable vs. Other Cable Brands

Outer Jacket Quality

Typical Self-regulating Heat Cable

The outer jacket of typical self-reg cable tends to “bubble” or separate from the cable core when the cable is manipulated for turns. These irregularities create stress points on the cable that can result in water reaching the core, leading to erratic heating and eventual cable failure.



Other Leading Brands of Self-regulating Cable

The outer jacket of most self-regulating heat cable separates from the core at a typical bend radius of 2 inches.

ProLine Self-regulating Heat Cable

ProLine self-regulating heat cable features a higher quality outer jacket that does not “bubble”. This reduces the chances of water seepage and cable failure.



ProLine Radiant Self-regulating Heat Cable

ProLine self-regulating heat cable does not “bubble” at an even tighter bend radius of 1½ inches.

Installation at Low Temperatures

Typical Self-regulating Heat Cable

Typical self-regulating cable has a minimum installation temperature of 32-40°F. This is because the carbon in the cable becomes brittle and can easily break when bent or manipulated at low temperatures.

The outer jacket also becomes stiff, making the securing of cable to the pipes difficult during cold weather installations. The outer jacket tends to “pucker” and pull away from the core when making bends, compromising the cable’s integrity and leading to cable failure. Therefore installing most self-regulating heat cable at temperatures below 40°F is not recommended.



ProLine self-regulating heat cable and plug with GFCI.

ProLine Self-regulating Heat Cable

ProLine self-regulating cable features a higher quality carbon center that is more resilient in low temperatures, thereby allowing the cable to be safely installed at temperatures as low as 0°F.

The higher quality outer jacket also remains flexible at low temperatures, resulting in more reliable performance and easier installation when securing to various pipe trace applications.

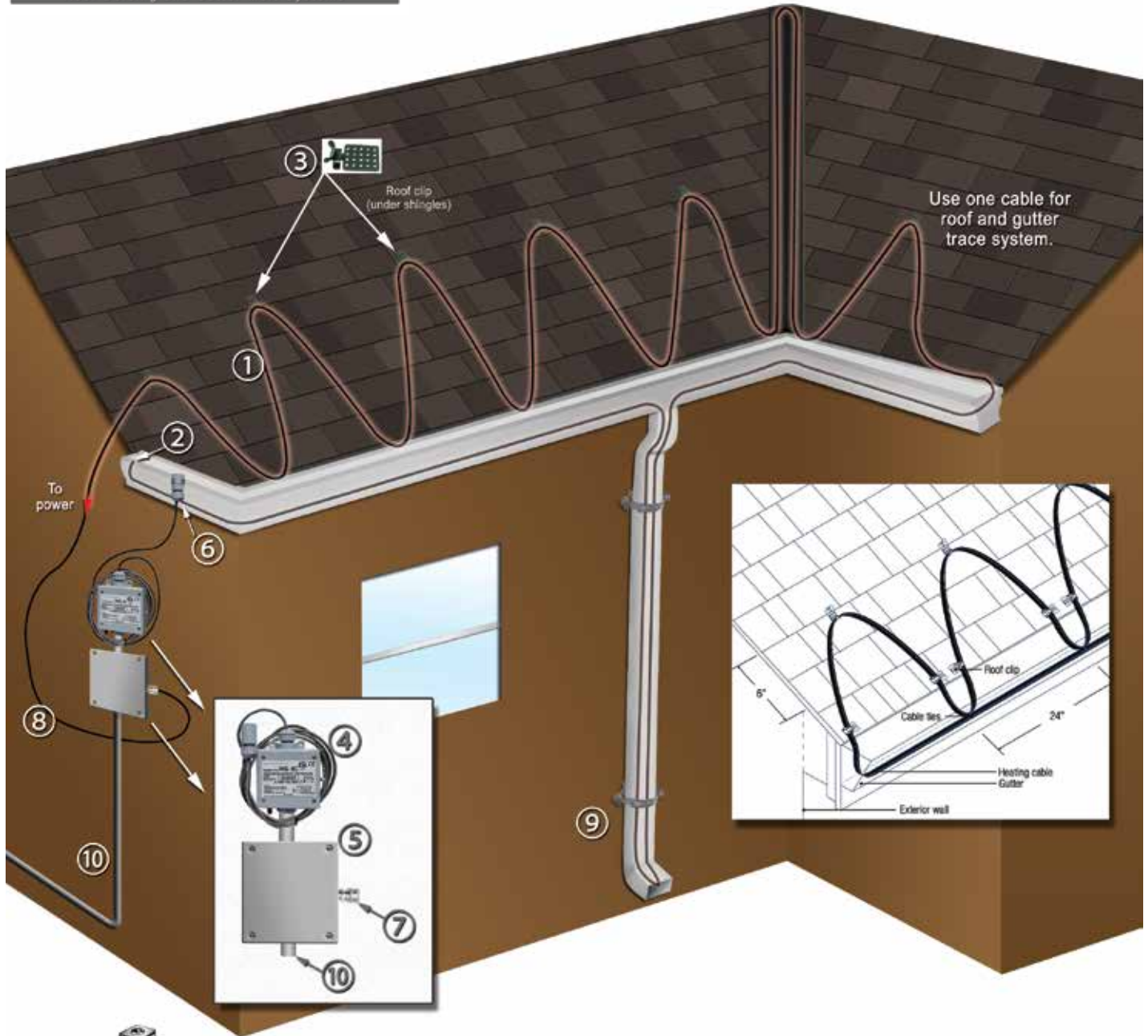
“In all the years I’ve been installing radiant heating systems, I’ve noticed that “bubbles” in the outer jacket of the cable almost always result in a point of failure. The superior outer jacket of ProLine’s self-reg cable helps to eliminate this problem.”

– Eric W., Licensed Contractor

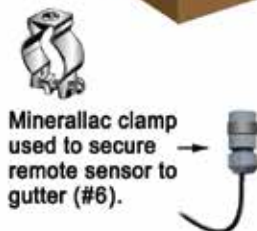
Self-Regulating Heat Cable System Overview



Several roof heating options are available from ProLine Radiant. The illustration below shows the general layout of a self-regulating heat cable system, heating the roof edges, valley, gutter and downspout. For specific installation information please refer to the installation manual.



Self-reg Cable



- ① Self-regulating heat cable
- ② End seal (termination) kit
- ③ Roof cable clips (under shingles)
- ④ Snow sensor or thermostat (WS-8C sensor with inline sensor shown)
- ⑤ Mulberry or Bell weatherproof junction box
- ⑥ Remote sensor (secured with Minerallac clamp)
- ⑦ Power connection kit
- ⑧ Drip loop (prevents water from trailing into the junction box)
- ⑨ Double or single downspout hanger
- ⑩ Conduit to home

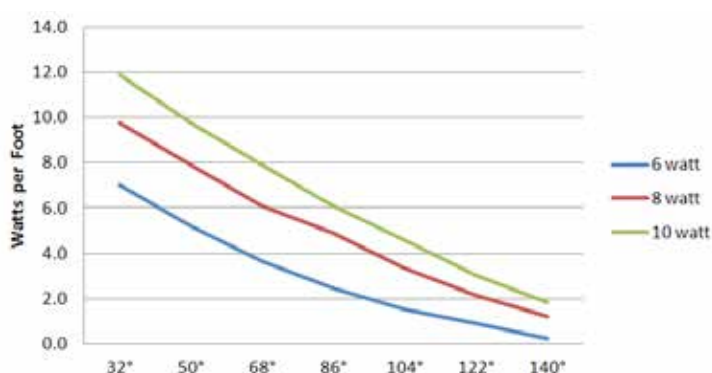


PLSRL Heat Trace Cable Data Sheet

PLSRL self-regulating heat cable is the cable of choice for roof heating and gutter trace applications. The cable features a flexible outer jacket and durable carbon core, providing consistent performance, long lifespan, and easy installation in cold temperatures.

Technical Data for PLSRL Heat Cable	
Service voltage	110-120 V, 220-277 V
Maximum maintain or continuous exposure temperature (power on)	+149°F (65°C)
Maximum intermittent exposure temperature 1000 hours (power on/off)	+185°F (85°C)
Minimum installation temperature	-40°F (-40°C)
Protective braid resistance	<.006Ω/ft.
Bus wire gauge	16 AWG
Approvals	cUL; ATEX, IECEx
Warranty	2 years

Watts per foot Power Output Curves



PLSRL Cable Dimensions

Type	Dimensions	Minimum Bend Radius
PLSRL-C	9.3 x 4.4 mm	1-inch (26 mm)
PLSRL-CR	10.9 x 6.0 mm	1.4 inches (36 mm)
PLSRL-CT	10.3 x 5.4 mm	1.25 inches (32 mm)

Maximum Length (m) vs Circuit Breaker Size

Cable	Startup Temp.	120 V			240 V		
		15A	20A	30A	15A	20A	30A
PLSRL-6-1 and PLSRL-6-2	50°F (+10°C)	225	275	275	466	547	547
	32°F (0°C)	220	260	265	456	518	523
	-4°F (-20°C)	195	230	230	407	456	460
	-40°F (-40°C)	170	180	190	351	360	387
PLSRL-8-1 and PLSRL-8-2	50°F (+10°C)	200	230	240	403	459	480
	32°F (0°C)	165	210	245	348	406	485
	-4°F (-20°C)	135	180	210	285	354	420
	-40°F (-40°C)	105	145	150	220	285	301
PLSRL-10-1 and PLSRL-10-2	50°F (+10°C)	140	170	215	298	334	426
	32°F (0°C)	130	160	170	265	321	334
	-4°F (-20°C)	75	110	140	167	216	275
	-40°F (-40°C)	65	90	105	144	173	203

ORDERING INFORMATION

PLSRL-□-□-□ For example: PLSRL-8-2-CR

Outer jacket

C=Tinned copper braid (no outer jacket)
R=Thermoplastic
T=Fluoropolymer

Supply Voltage

1=110-120VAC; 2=208-277 VAC

Output Power (at 40°F)

Example: PLSRL-8-2-CR = 8 watt, 208-277 V, Thermoplastic outer jacket



ProLine self-regulating heat cable.

Approvals:

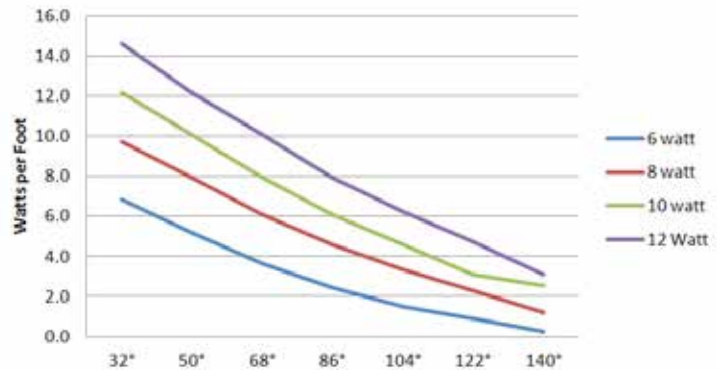


PLSRR Heat Trace Cable Data Sheet

PLSRR is listed self-regulating heat cable that can be used for roof / gutter heating and pipe tracing applications. The cable features a flexible, UV-stabilized thermoplastic elastomer overjacket that protects the carbon core for wet applications and exposure to the sun. The parallel heating cable is designed for a variety of industrial applications and environments, including explosion-hazardous and nonhazardous areas, and can be used for plastic or metal pipe freeze protection and temperature maintenance of tanks, pipes and valves. The cable includes a NON-PRORATED 10-year warranty.

Technical Data for PLSRR Heat Cable	
Service voltage	110-120 V, 220-277 V
Maximum maintain or continuous exposure temperature (power on)	+149°F (65°C)
Maximum intermittent exposure temperature 1000 hours (power on/off)	+185°F (85°C)
Minimum installation temperature	-40°F (-40°C)
Protective braid resistance	<.006Ω/ft.
Bus wire gauge	16 AWG
Approvals	cULus; hazardous, CSA, ATEX, IECEx
Warranty	10 years (Not prorated)

Watts per foot Power Output Curves



Self-reg Cable

ORDERING INFORMATION

PLSRR-□-□-□ For example: PLSRR-8-2-CR

Outer jacket

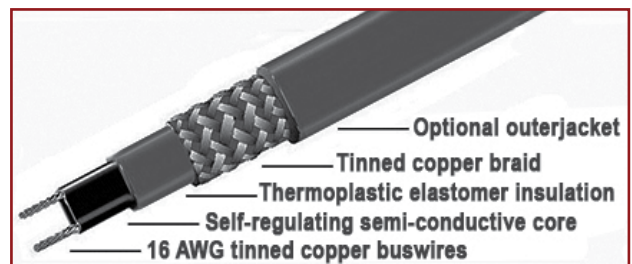
C=Tinned copper braid
(no outer jacket)
R=Thermoplastic
T=Fluoropolymer

Supply Voltage

1=110-120VAC; 2=208-277 VAC

Output Power (at 40°F)

Example: PLSRR-8-2-CR =
8 watt, 208-277 V, Thermoplastic outer jacket



Cutaway view of ProLine self-regulating heat cable.

Approvals:



PLSRR Dimensions and Bend Radius

Type	Dimensions	Minimum Bend Radius
PLSRR-C	11.0 x 4.4 mm	1-inch (26 mm)
PLSRR-CR	12.6 x 6.0 mm	1.4 inches (36 mm)
PLSRR-CT	12.0 x 5.4 mm	1.25 inches (32 mm)

Maximum Length (m) vs Circuit Breaker Size

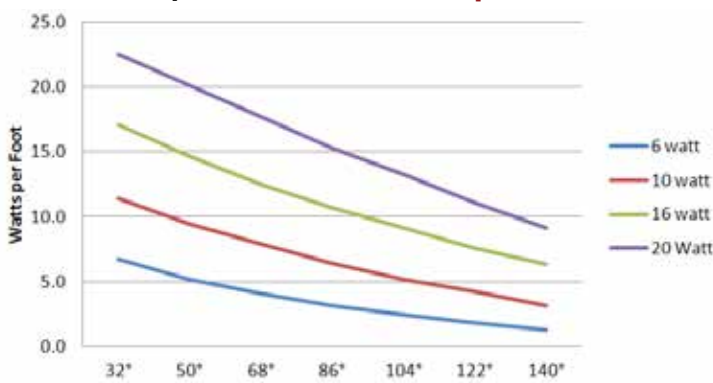
Cable	Startup Temp.	120 V				240 V			
		15A	20A	30A	40A	15A	20A	30A	40A
PLSRR-6-1 and PLSRR-6-2	50°F (+10°C)	225	265	265	265	450	530	530	530
	0°F (-18°C)	140	190	265	265	280	375	530	530
	-20°F (-29°C)	125	165	245	265	245	325	490	530
	-40°F (-40°C)	110	145	215	265	215	290	430	530
PLSRR-8-1 and PLSRR-8-2	50°F (+10°C)	150	200	210	210	300	400	420	420
	0°F (-18°C)	100	130	200	210	200	260	400	420
	-20°F (-29°C)	85	115	175	210	170	230	350	420
	-40°F (-40°C)	75	105	160	180	150	210	320	360
PLSRR-10-1 and PLSRR-10-2	50°F (+10°C)	120	155	180	180	240	310	360	360
	0°F (-18°C)	80	110	160	180	160	215	320	360
	-20°F (-29°C)	70	95	145	180	140	190	285	360
	-40°F (-40°C)	60	85	130	170	120	170	255	340
PLSRR-12-1 and PLSRR-12-2	50°F (+10°C)	90	115	115	120	180	230	230	240
	0°F (-18°C)	65	80	90	105	125	160	180	210
	-20°F (-29°C)	45	65	80	80	90	125	160	160
	-40°F (-40°C)	45	50	60	80	85	100	120	160

PLSRP Medium Temp Heat Trace Cable

PLSRP self-regulating heat cable is an industrial grade self-regulating heat trace cable designed for pipe trace applications. The cable features a flexible outer jacket and durable carbon core, providing consistent performance, long lifespan, and easy installation in cold temperatures.

Technical Data for PLSRP Heat Cable	
Service voltage	110-120 V, 220-277 V
Maximum maintain or continuous exposure temperature (power on)	+230°F (110°C)
Maximum intermittent exposure temperature 1000 hours (power on/off)	+275°F (135°C)
Minimum installation temperature	-22°F (-30°C)
Protective braid resistance	<.006Ω/ft.
Bus wire gauge	16 AWG (6 and 10 W/ft.) 14 AWG (16 and 20 W/ft.)
Approvals	Hazardous, IECEx
Warranty	10 years

Watts per foot Power Output Curves



ORDERING INFORMATION

PLSRP-□-□-□ For example: PLSRP-10-2-CT

Outer jacket

T=Fluoropolymer

Supply Voltage

1=110-120VAC; 2=208-277 VAC

Output Power (at 40°F)

Example: PLSRP-10-2-CT =
10 watt, 208-277 V, Fluoropolymer outer jacket

NOTE: This product is a special order item. Please contact ProLine for more details.

PLSRP Dimensions and Bend Radius

Type	Dimensions	Minimum Bend Radius
PLSRP-CT	12.4 x 4.8 mm	1.10 inches (28 mm)

Maximum Length (m) vs Circuit Breaker Size

Cable	Startup Temp.	120 V				240 V			
		15A	20A	30A	40A	15A	20A	30A	40A
PLSRP-6-1 and PLSRP-6-2	50°F (+10°C)	130	195	210	210	265	390	420	420
	0°F (-18°C)	105	160	195	195	210	320	390	390
	-20°F (-29°C)	100	150	170	185	195	295	340	365
	-40°F (-40°C)	90	140	165	180	180	275	330	360
PLSRP-10-1 and PLSRP-10-2	50°F (+10°C)	100	135	175	175	200	265	347	347
	0°F (-18°C)	95	150	180	175	190	295	360	360
	-20°F (-29°C)	80	125	155	155	160	249	311	311
	-40°F (-40°C)	70	100	130	140	140	200	260	280
PLSRP-16-1 and PLSRP-16-2	50°F (+10°C)	95	120	155	155	187	239	308	308
	0°F (-18°C)	88	108	135	135	173	216	265	265
	-20°F (-29°C)	58	70	80	90	114	141	160	180
	-40°F (-40°C)	55	70	80	88	108	137	160	173
PLSRP-20-1 and PLSRP-20-2	50°F (+10°C)	83	100	130	150	164	203	262	300
	0°F (-18°C)	73	90	115	130	144	180	229	255
	-20°F (-29°C)	50	68	85	110	101	134	167	220
	-40°F (-40°C)	50	60	75	95	98	121	147	190



Approvals:

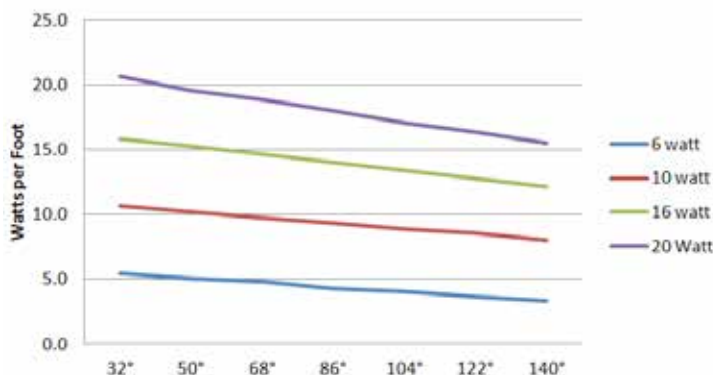


PLSRS High Temp Heat Trace Cable

PLSRS is an industrial grade self-regulating heat cable is designed for pipe trace applications. The cable features a flexible outer jacket and durable carbon core, providing consistent performance, long lifespan, and easy installation in cold temperatures.

Technical Data for PLSRS Heat Cable	
Service voltage	110-120 V, 220-277 V
Maximum maintain or continuous exposure temperature (power on)	+248°F (120°C)
Maximum intermittent exposure temperature 1000 hours (power on/off)	+392°F (200°C)
Minimum installation temperature	-22°F (-30°C)
Protective braid resistance	<.006Ω/ft.
Bus wire gauge	16 AWG
Approvals	Hazardous, ATEX, IECEx
Warranty	10 years

Watts per foot Power Output Curves



Self-reg Cable

PLSRS Dimensions and Bend Radius

Type	Dimensions	Minimum Bend Radius
PLSRS-CT	10.2 x 4.6 mm	1.06 inches (27 mm)



ProLine (PLSRS) self-regulating pipe trace cable.

ORDERING INFORMATION

PLSRS-□-□-□ For example: PLSRS-10-2-CT

- Outer jacket**
T=Fluoropolymer
- Supply Voltage**
1=110-120VAC; 2=208-277 VAC
- Output Power (at 40°F)**

Example: PLSRS-10-2-CT = 10 watt, 208-277 V, Fluoropolymer outer jacket

NOTE: This product is a special order item. Please contact ProLine for more details.

Maximum Length (m) vs Circuit Breaker Size

Cable	Startup Temp.	120 V					240 V				
		15A	20A	30A	40A	50A	15A	20A	30A	40A	50A
PLSRS-6-1 and PLSRS-6-2	50°F (+10°C)	180	240	360	385	385	360	480	720	770	770
	0°F (-18°C)	160	210	320	385	385	320	420	640	770	770
	-20°F (-29°C)	150	200	305	385	385	300	400	610	770	770
	-40°F (-40°C)	145	195	290	385	385	290	385	580	770	770
PLSRS-10-1 and PLSRS-10-2	50°F (+10°C)	110	145	220	270	270	220	290	440	540	540
	0°F (-18°C)	95	130	195	260	270	190	260	390	520	540
	-20°F (-29°C)	95	125	190	250	270	190	250	380	500	540
	-40°F (-40°C)	90	120	175	230	260	180	240	350	460	520
PLSRS-16-1 and PLSRS-16-2	50°F (+10°C)	70	100	144	190	210	140	200	285	380	420
	0°F (-18°C)	65	90	135	185	210	130	180	270	350	420
	-20°F (-29°C)	63	83	125	168	210	125	165	250	335	420
	-40°F (-40°C)	60	80	120	160	210	120	160	240	320	420
PLSRS-20-1 and PLSRS-20-2	50°F (+10°C)	59	75	115	153	185	115	150	230	306	370
	0°F (-18°C)	55	71	105	144	175	110	142	210	286	350
	-20°F (-29°C)	50	68	100	133	165	100	135	200	265	330
	-40°F (-40°C)	48	63	95	125	160	95	125	190	250	320



Approvals:

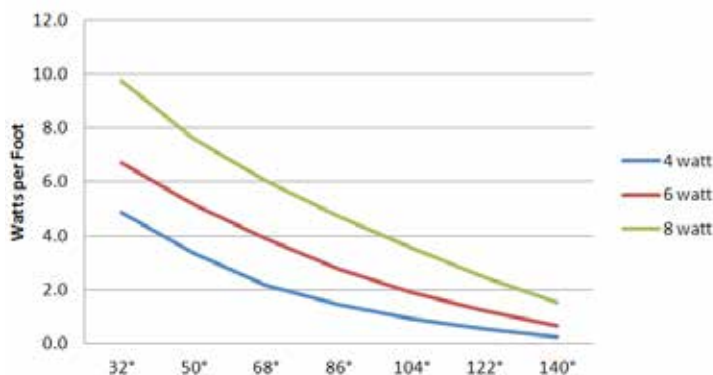


PLSRM Heat Trace Cable Data Sheet

PLSRM self-regulating heat cable is designed for pipe trace applications. The cable provides safe, reliable heat tracing for freeze protection or temperature maintenance of pipes, valves, and flanges, etc. PLSRM heat cable is suitable for use on small diameter plastic or metal pipes and instrument tubing in residential and light commercial applications. The heat cable features a flexible outer jacket and durable carbon core, providing consistent performance, long lifespan, and easy installation in cold temperatures.

Technical Data for PLSRM Heat Cable	
Service voltage	110-120 V, 220-277 V
Maximum maintain or continuous exposure temperature (power on)	+149°F (65°C)
Maximum intermittent exposure temperature 1000 hours (power on/off)	+185°F (85°C)
Minimum installation temperature	-40°F (-40°C)
Protective braid resistance	<.006Ω/ft.
Bus wire gauge	22 AWG
Approvals	ETL
Warranty	2 years

Watts per foot Power Output Curves



ORDERING INFORMATION

PLSRM-□-□-□ For example: PLSRM-6-2-CR

Outer jacket

C=Tinned copper braid
(no outer jacket)
R=Thermoplastic

Supply Voltage

1=110-120VAC; 2=208-277 VAC

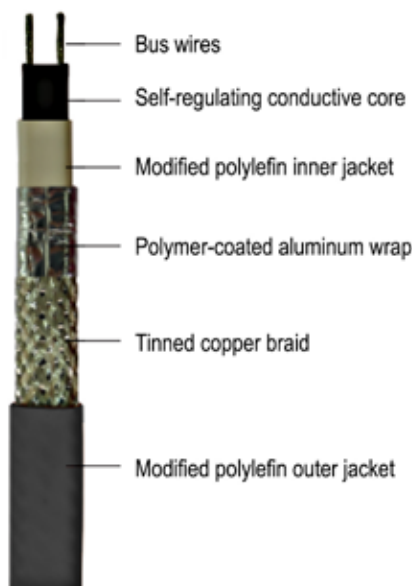
Output Power (at 40°F)

Example: PLSRM-6-2-CR =
6 watt, 208-277 V, Thermoplastic outer jacket

NOTE: This product is a special order item. Please contact ProLine for more details.

PLSRM Dimension and Bend Radius

Type	Dimensions	Minimum Bend Radius
PLSRM-C	6.4 x 4.1 mm	.99-inch (25 mm)
PLSRM-CR	8.3 x 5.7 mm	1.3 inches (34 mm)



Cutaway view of PLSRM heat cable.



Maximum Length vs Circuit Breaker Size

Heat Cable	Startup Temp.	120 V			240 V		
		Breaker Size			10A	15A	20A
PLSRM-4-1 and PLSRM-4-2	50°F (+10°C)	205	210	210	403	419	419
	32°F (0°C)	160	200	200	320	393	393
	-4°F (-20°C)	135	190	190	265	377	377
	-40°F (-40°C)	100	160	160	196	314	344
PLSRM-6-1 and PLSRM-6-2	50°F (+10°C)	140	170	185	278	334	368
	32°F (0°C)	135	165	170	265	324	334
	-4°F (-20°C)	95	145	170	183	288	334
	-40°F (-40°C)	70	115	142	137	223	282
PLSRM-8-2 and PLSRS-8-2	50°F (+10°C)	55	75	85	105	145	170
	32°F (0°C)	50	65	85	85	126	168
	-4°F (-20°C)	30	44	55	55	83	114
	-40°F (-40°C)	22	29	46	42	55	91

Pre-Assembled Heat Trace Cable

ProLine pre-assembled (pre-terminated) self-regulating heat cable is the premier solution for quick, easy installation for roof and gutter heating and pipe trace applications. The 120 volt pre-assembled plug-and-play kits come with the option of a standard power cord with or without a GFCI power plug. The termination, power connection, splice, tee, and end seal kit reduces installation time and requires no special skills or tools.

PLSRT-1 120 V Pre-Assembled Heat Cable

ProLine PLSRT-120 pre-assembled self-regulating heating cable is designed for commercial metal and plastic pipe protection and roof and gutter deicing applications. The 120-volt heating cables are available in 6, 12, 18, 24, 50, 75, 100, 125 and 150-foot lengths, and each comes assembled with a 6-foot power cord and plug.

PLSRT-1 heating cables may be used on:

- Roofs made from all types of standard roofing materials, including shake, shingle, rubber, tar, wood, metal, and plastic.
- Gutters made from standard materials, including metal and plastic.
- Downspouts made from standard materials, including metal and plastic.



ProLine 120 V pre-terminated self-regulating heat cable.

PLSRT-1 General Specifications (110-120 V)

Nominal cable width	½-inch (12.7 mm)
Nominal cable thickness	.24-inch (6.1 mm)
Bus wire gauge	16 AWG
Circuit breaker size	15 amps
Plug rating	15 amps
Maximum exposure temperature	150°F (65°C)
Minimum installation temperature	-40°F (-40°C)
Voltage rating	110-120 V
Protective braid resistance	< 18.2Ω/km
Cold lead length	6 feet with plug
Electrical classification	Non-hazardous; ordinary areas
Exposure to chemicals	None

PLSRT-2 240 V Pre-Assembled Heat Cable

PLSRT-2 240-volt pre-assembled electric heating cable is intended for installation on metal or plastic water pipes for freeze protection in commercial locations. PLSRT-2 heating cable is available in 6, 12, 18, 24, 50, 75, 100, 125, 150, 175 and 200-foot lengths with a 6-foot power cord.

General Instructions

Install only in accessible locations; do not install behind walls or where the cable would be hidden.

Do not run the heating cable through walls, ceilings, or floors.

Connect only to ground-fault protected outlets that have been installed in accordance with all prevailing national and local codes and standards and are protected from rain and other water.

PLSRT-2 General Specifications (208-277 V)

Nominal cable width	½-inch (12.7 mm)
Nominal cable thickness	.24-inch (6.1 mm)
Bus wire gauge	18 AWG
Circuit breaker size	15 amps
Cold lead length	6 feet
Maximum exposure temperature	150°F (65°C)
Minimum installation temperature	-40°F (-40°C)
Voltage rating	208-277 V
Electrical classification	Non-hazardous; ordinary areas
Exposure to chemicals	None

General Usage Guidelines

- ProLine Radiant pre-terminated heating cables are not intended for use on flexible vinyl tubing (such as garden hoses).
- The heating cables should not be used inside any pipes.
- PLSRT pre-assembled heat cable is not intended for freeze protection of liquids other than water or for use in locations classified as 'hazardous'.
- Use a minimum of ½-inch fire-resistant, waterproof thermal insulation when installing the PLSRT heat cable on pipes.
- Never use the heat cable on pipes that may exceed 150°F (65°C).
- Do not use an extension cord with the heat cable.

Pre-assembled Heat Cable Selection Chart for Pipes

For commercial/industrial heat trace cable selection, contact ProLine at 866.676.9276.

PLSRT-1 Pre-assembled Heat Cable

PLSRT-	1-6	1-12	1-18	1-24	1-50	1-75	1-100	1-125	1-150
Cable length in feet (meters)	6 (1.8)	12 (3.7)	18 (5.5)	24 (7.3)	50 (15.2)	75 (22.9)	100 (30.5)	125 (38.1)	150 (45.7)
Min. power output at 40°F (5°C) (watts)	36	72	108	144	300	450	600	750	900
Nominal power output at 0°F/-18° (watts)	48	96	144	192	400	600	800	1,000	1,200

A	PLSRT-1-6	B	PLSRT-1-12	C	PLSRT-1-18	D	PLSRT-1-24	E	PLSRT-1-50	F	PLSRT-1-75	G	PLSRT-1-100	Metal Pipes	Plastic Pipes
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Pipe Diameter	Pipe Length (in feet)																				
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
½-inch (12.7 mm)	M	A	B	C	D	E	E	E	E	E	E	F	F	F	F	F	G	G	G	G	G
	P	A	B	C	D	E	E	E	E	E	F	F	F	F	F	G	G	G	G	G	G
1-inch (25.4 mm)	M	A	B	C	D	E	E	E	E	E	E	F	F	F	F	F	G	G	G	G	G
	P	B	B	C	D	E	E	E	E	E	F	F	F	F	F	G	G	G	G	G	-
1½-inch (28.1 mm)	M	A	B	C	D	E	E	E	E	E	E	F	F	F	F	F	G	G	G	G	G
	P	B	C	D	E	E	E	E	F	F	G	G	G	G	G	-	-	-	-	-	-
2-inch (12.7 mm)	M	A	B	C	D	E	E	E	E	E	F	F	F	F	F	F	G	G	G	G	-
	P	B	B	E	E	E	F	F	G	G	G	G	-	-	-	-	-	-	-	-	-
2½-inch (12.7 mm)	M	A	B	C	D	E	E	E	E	E	F	F	F	F	F	G	G	G	G	-	-
	P	B	D	E	E	F	F	F	G	G	-	-	-	-	-	-	-	-	-	-	-

NOTE: Add 1 foot to the pipe length for each valve or spigot on your pipe system. If cable selected is longer than the pipe, spiral it evenly along the entire pipe.

PLSRT-2 Pre-assembled Heat Cable

Cable (Item Number)	Cable length in feet (meters)	Min. power output at 40°F/5° (watts)	Nominal power output at 0°F/-18° (watts)	Max. current draw on a pipe at 40°F/5° (amps)	Max. current draw on a pipe at 0°F/-18° (amps)
PLSRT-2-6	6 (1.8)	36	48	0.21	0.32
PLSRT-2-12	12 (3.7)	72	96	0.43	0.64
PLSRT-2-18	18 (5.5)	108	144	0.64	0.96
PLSRT-2-24	24 (7.3)	144	192	0.85	1.28
PLSRT-2-50	50 (15.2)	300	400	1.78	2.67
PLSRT-2-75	75 (22.9)	450	600	2.67	4.00
PLSRT-2-100	100 (30.5)	600	800	3.56	5.33
PLSRT-2-125	125 (38.1)	750	1,000	4.45	6.67
PLSRT-2-150	150 (45.7)	900	1,200	5.34	8.00
PLSRT-2-175	175 (53.3)	1,050	1,400	6.23	9.33
PLSRT-2-200	200 (61.0)	1,200	1,600	7.12	10.67

ProLine Radiant 120 V pre-terminated self-regulating heat cable with and without a ground fault circuit interrupter (GFCI).





Constant Wattage Heat Trace Cable

PLCW Roof, Gutter and Pipe Heating

The PLCW constant wattage heat trace cable is pre-assembled and ready to install. The cable can be used to prevent pipes from freezing and keep water flowing on roofs and gutters in temperatures as cold as -40°F (-40°C).

Using an energy saving thermostat, PLCW cables operate on 120/240 volts AC and are suitable for use on plastic and metal water pipes.

This quality system features components that are made of the highest quality material and tested during critical points in the manufacturing process.

The PLCW Series system is easy to buy and install in various cable length increments to accommodate many pipe lengths with diameters up to 1.5 inches.

Features

- Each cable consists of tough XLPE inner insulation, AL foil, a continuous ground braid, and a weather resistant PVC (high-low temperature) outer jacket.
- Includes advanced, energy saving thermostat.
- Comes pre-assembled, facilitating quick, easy installation.
- Can keep water flowing in temperatures as cold as -40°F (-40°C).
- Indicator light in plug (PLCW-7-1)
- 3-year limited warranty

The PLCW Series system is easy to install for a variety of pipe lengths with diameters up to 1.5 inches.



Heat Cable

ORDERING INFORMATION

PLCW-5 Item Number	Voltage	Cable Length	Output W/foot	Watts	Amps	Ohms
PLCW-5-1-20	120 V	20	5	100	0.8	144.0
PLCW-5-1-30	120 V	30	5	150	1.3	96.0
PLCW-5-1-60	120 V	60	5	300	2.5	48.0
PLCW-5-1-80	120 V	80	5	400	3.3	36.0
PLCW-5-1-100	120 V	100	5	500	4.2	28.8
PLCW-5-1-120	120 V	120	5	600	5.0	24.0
PLCW-5-1-160	120 V	160	5	800	6.7	18.0
PLCW-5-1-200	120 V	200	5	1,000	8.3	14.4
PLCW-5-1-240	120 V	240	5	1,200	10.0	12.0

PLCW-7 Item Number	Voltage	Cable Length	Output W/foot	Watts	Amps	Ohms
PLCW-7-1-3	120 V	3	7	21	0.2	685.7
PLCW-7-1-6	120 V	6	7	42	0.4	342.9
PLCW-7-1-9	120 V	9	7	63	0.5	228.6
PLCW-7-1-12	120 V	12	7	84	0.7	171.4
PLCW-7-1-15	120 V	15	7	105	0.9	137.1
PLCW-7-1-18	120 V	18	7	126	1.1	114.3
PLCW-7-1-24	120 V	24	7	168	1.4	85.7
PLCW-7-1-30	120 V	30	7	210	1.8	68.6
PLCW-7-1-40	120 V	40	7	280	2.3	51.4
PLCW-7-1-60	120 V	60	7	420	3.5	34.3
PLCW-7-1-80	120 V	80	7	560	4.7	25.7

PLCW General Specifications

	5 Watt	7 Watt
Cable construction	Twin conductor	Twin conductor
Rated voltage	120 VAC	120/240 VAC
Output	5W/ft.	7 W/ft.
Heating element size	20-240 feet	3-80 feet
Bending radius	1 inch	1 inch
Conductor insulation	XLPE	XLPE
Outer insulation	PVC	PVC
Minimum installation temperature	32°F (0°C)	15°F (-10°C)
Cold lead	6 ft. length 18/3 with plug	6 ft. length 18/3 (120 V with plug)

PLCW-7 Item Number	Voltage	Cable Length	Output W/foot	Watts	Amps	Ohms
PLCW-7-2-6	240 V	6	7	42	0.2	1371.4
PLCW-7-2-9	240 V	9	7	63	0.3	914.3
PLCW-7-2-12	240 V	12	7	84	0.4	685.7
PLCW-7-2-15	240 V	15	7	105	0.5	548.6
PLCW-7-2-18	240 V	18	7	126	0.6	457.1
PLCW-7-2-24	240 V	24	7	168	0.7	342.9
PLCW-7-2-30	240 V	30	7	210	0.9	274.3
PLCW-7-2-40	240 V	40	7	280	1.2	205.7
PLCW-7-2-60	240 V	60	7	420	1.8	137.1
PLCW-7-2-80	240 V	80	7	560	2.4	102.9

* This is a special order item. Please contact ProLine for more details.



ProLine Cable Selection Guide

Heat Cable	Voltage	Application	Max. maintain temp	Max. exposure temp	Output at 40°F (watts)	Certification
Self-regulating Heat Cable						
PLSRL	110-120 V 208-277 V	Roof and gutter deicing in commercial and residential applications	149°F (65°C)	185°F (85°C)	6,8,10	Non-hazardous
PLSRR	110-120 V 208-277 V	Pipe heating and roof and gutter deicing in commercial and industrial applications	149°F (65°C)	185°F (85°C)	6,8,10,12	Class I, Div.2* Groups A,B,C,D; Class II, Div.2 Groups E, F, G; Class III, T-coded (T5 or T6) *C1D1 soon
PLSRP	110-120 V 208-277 V	Industrial pipe and tank heating applications	230°F (110°C)	275°F (135°C)	6,10,16,20	Class I, Div.2* Groups A,B,C,D; Class II, Div.2 Groups E, F, G; Class III, T-coded (T5 or T6) *C1D1 soon
PLSRS	110-120 V 208-277 V	Industrial pipe and tank heating applications	248°F (120°C)	392°F (200°C)	6,10,16,20	Class I, Div.2* Groups A,B,C,D; Class II, Div.2 Groups E, F, G; Class III, T-coded (T5 or T6) *C1D1 soon
PLSRM	110-120 V 208-277 V	Residential water pipe heating applications	149°F (65°C)	185°F (85°C)	4,6,8	Non-hazardous
Pre-assembled Self-regulating Heat Cable (Pre-terminated)						
PLSRT	110-120 V 208-277 V	Roof and gutter deicing and metal and plastic pipe protection in commercial and residential applications	149°F (65°C)	149°F (65°C)	6	Non-hazardous
Constant Wattage Heat Cable Kits						
PLCW-5	120 V	Pipe heating and roof and gutter deicing in commercial and residential applications			5	Non-hazardous
PLCW-7	120-240 V	Pipe heating and roof and gutter deicing in commercial and residential applications			7	Non-hazardous



Pipe Trace Controls

ProLine offers state-of-the-art, custom engineered control panels designed for your specific requirements. ProLine controllers continuously monitor your heat tracing system and provide you with user-settable alarms for temperature, heater current and ground fault current (all independent of the trip levels) to maintain your heat trace system and warn you of potential problems. This advanced heat trace system offers local, group and central computer interfaces.

Features and Benefits Include:

Alarm Outputs and Early Warning Alarm – Alarm alerts users to problems, even when the circuit is not in use.

Modbus® Protocol – Allows easy interfacing with the master controller software and links to PLC and DCS systems.

Statistics Monitoring – Plant-wide Windows-based monitoring software allows users to save energy by monitoring peak demand times. Provides energy monitoring tools through the measured values of heater utilization, power consumption (MWh), and operating costs.

Staggerstart (Power Limiting) – Limits initial startup power.

Proportional Control – Provides tight process temperature control.

Custom Configured Software Interface – Local, remote, or centralized control and monitoring are available, as well as standalone control and multi-point control panels.

Switching Unit Options – Solid state or mechanical.

Easy to read Display – 2x16-character alphanumeric display (field mounted or remote mounted).

Friendly Interface and Easy to read Display – Local and Remote interface choices are available. The Local Interface communicates with a single controller of up to 10 circuits and up to five feet away. The Remote Interface communicates with multiple controllers (up to 30 controllers or 300 circuits), to a maximum of 4,000 feet without repeaters.

RS 485 Serial Port Connections

Load Shedding – A master override input allows for external control for load-shedding or ambient control.

Advanced Control

The advanced features of this controller allow it to handle single-phase to three-phase heat trace applications with switch ratings up to 100A at 600 VAC. Integral user-settable ground fault trip protects the heat trace without costly ground fault breakers. The user-settable ground fault test function lets you know if ground fault monitoring is functioning properly. The RTD



inputs (dual RTD inputs available) have a user-settable fail-safe strategy.

Master Controller Centralized Monitoring

For plant-wide monitoring, the master controller for windows software package provides programming and monitoring for ProLine heat tracing controllers on your PC. Process setpoints and alarm levels are programmed for each heater through the computer keyboard, reducing data entry on large systems. Setpoint programming and configuration functions are password protected. By connecting individual modules or panels together, heat tracing throughout an entire plant can be programmed and monitored from a single location.



Pipe Trace

Cable Accessories and Connections



Item Code and Description	Components	
PLSR-PTBO - Multiple entry power connection kit and junction box	Multiple entry octagon power connection kit with J-Box; hazardous locations, NEMA 4X	
PLSR-JHE - End seal kit (hazardous locations)	A Seal plate for main box B Main end seal box C Grommets D Label	
PLSR-JHS - Inline splice tee kit; (hazardous locations)	A Main box B Pressure seal end C Grommets D Gaskets for main box E Cover for main box F Label	
PLSR-JHT - Tee splice (hazardous locations)	A Main box B Pressure seal end C Grommets D Gaskets for main box E Cover for main box F Label	
PLSR10 - Splice / tee kit	A Clamp tie B Mastic strips (1½" long x 1" wide) C Heat-shrinkable tube (8" long x 1" diameter) D Heat-shrinkable tube (1" long x ⅜" diameter) E Heat-shrinkable tube (1" long x ½" diameter) F Uninsulated braid crimp G Heat-shrinkable tube for ground H Insulated bus wire crimps I Black cloth tape (6" long) J Heat-shrinkable cap K Cable ties	
PLSR00 - Power connection kit with end seal kit (PLSR12)	A Black-shrinkable tube (2) (5½" long x ⅜" diameter) B Green-shrinkable tube (6" long x ¼" diameter) C Black-shrinkable tube (1" long x ½" diameter) D Seal fitting and grommet E Mounting bracket for piping F Gasket G Lock nut H Grommet I Wire nuts (3) J Labels (4)	



Roof and Gutter Trace Controls

Self-regulating Heat Trace Cable

ProLine Radiant roof deicing systems are custom designed to best serve the needs of each specific installation. In addition to the custom heating cable layout, users also have activation device/controller options for operating the system.

WS-8C Aerial Mount Sensor - The WS-8C activation device is designed for gutter, downspout, and roof ice melting and small satellite antenna deicing. The totally sealed, low voltage, remote-mount precipitation sensor allows the user to install the small sensor head in a downspout, the back of a gutter, or at the end of an antenna boom, up to 10 feet away from the unit so that the main controller can be installed in a more convenient outdoor location.

The unit is housed in a two gang PVC enclosure. The overall dimensions of the WS-8C are 4¾" (120 mm) x 7" (178 mm) x 2¾" (70 mm). The unit weighs 2 pounds. The user may access all electronics by removing the four front cover screws.



WS-115 Outdoor Ambient Sensing Thermostat - The WS-115 ambient sensing thermostat is designed to sample temperature changes in the air. The WS-115 can be used in a wide range of heating applications and can serve as a high limit backup for "sensitive" applications. The NEMA 4X rain-tight enclosure provides adequate protection in most environments. The WS-115 thermostat has a temperature range of 40°F to 110°F and can handle up to 22 amps at 277 VAC.

WS-115 Features

- Rugged weather resistant enclosure made of corrosion resistant materials for long life.
- Stainless steel remote bulb provides rapid response to temperature change.
- Low mass, high surface area of stainless steel coiled sensor provides rapid response to temperature change.
- Large, readily visible dial with 0°F - 120°F temperature range and 40°F - 110°F.
- Multi-positional mounting offers flexibility in either new or existing installations.
- One control for both heating and cooling applications.



WS-115R Outdoor Surface Sensing Thermostat - The WS-115R surface sensing thermostat samples temperature changes in the surface. The sensor is typically used as a line sensing control for pipes, vessels and other types of electric heat tracing applications. Suitable for use in agricultural, industrial and commercial environments. The NEMA 4X rain-tight enclosure provides adequate protection in most environments.

WS-115R Features

- Rugged weather resistant enclosure made of corrosion resistant materials for long life.
- Stainless steel remote bulb provides rapid response to temperature change.
- Low mass, high surface area of stainless steel coiled sensor provides rapid response to temperature change.
- Large, readily visible dial with 0°F - 120°F temperature range.
- Multi-positional mounting offers flexibility in either new or existing installations.
- One control for both heating and cooling applications.
- Complies with NEC 547 and NEMA 4X requirements.



Roof Heating

Cable Accessories and Connections

PLSR14 - Roof clips

- A** Roof clips - 50 per bag

PLSR14IR - Roof clips

- A** Insulated roof clips - 50 per bag

PLSR15 - Downspout hanger kit

- A** Hanger bracket
B Clamp ties

PLSR10 - Splice / tee kit

- | | |
|---|--|
| A Clamp tie | G Cable ties |
| B Mastic strips (1½" long x 1" wide) | H Insulated bus wire crimps |
| C Heat-shrinkable tube (8" long x 1" diameter) | I Black cloth tape (6" long) |
| D Heat-shrinkable tube (1" long x ⅜" diameter) | J Heat-shrinkable cap |
| E Heat-shrinkable tube (1" long x ½" diameter) | K Heat-shrinkable tube for ground |
| F Uninsulated braid crimp | |

PLSR00 - Power connection kit - with end seal kit (PLSR12)

- | | |
|---|------------------------|
| A Black-shrinkable tube (2) (5½" long x ⅜" diameter) | F Gasket |
| B Green-shrinkable tube (6" long x ¼" diameter) | G Lock nut |
| C Black heat-shrinkable tube (1" long x ½" diameter) | H Grommet |
| D Seal fitting and black grommet | I Wire nuts (3) |
| E Mounting bracket for piping | J Labels (4) |



PLSR Cable Accessories and Controls

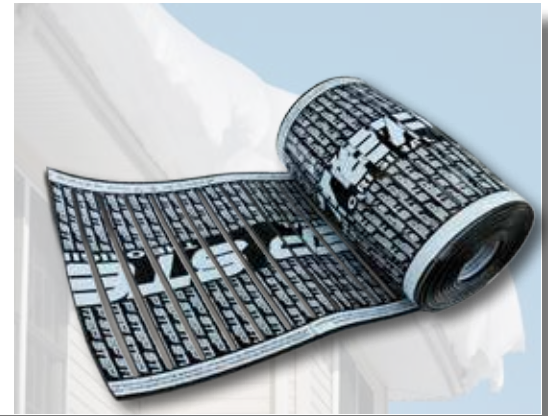
Item Number	Description
PLSR00-Roof	Power connection kit
PLSR03-Aluminum	Aluminum application tape
PLSR03-Fiberglass	Fiberglass application tape
PLSR08	Plug-in cord set, 120 V GFCI, 125 ft. maximum run length
PLSR10	Splice / tee kit
PLSR12	End seal kit
PLSR12L	End seal with light (can be used at beginning or end)
PLSR14	Roof clips - 50/bag
PLSR-14IR	Insulated roof clips - 50/bag
PLSR15	Downspout hanger kit
WS-115	Air sensing NEMA 4X outdoor thermostat 120/240 V
WS-115R	Surface sensing NEMA 4X outdoor thermostat
WS-8C	Aerial mounted snow switch with remote moisture sensor (30 amps; 120-277 V)



ProLine Radiant roof deicing and gutter trace systems can eliminate the build up of snow and ice, and protect homes from water damage due to ice dams. Gutters and downspouts are also protected from the damaging effects of heavy ice.



Low-Voltage Roof Deicing Systems



ProLine's Industry Leading Roof Deicing System

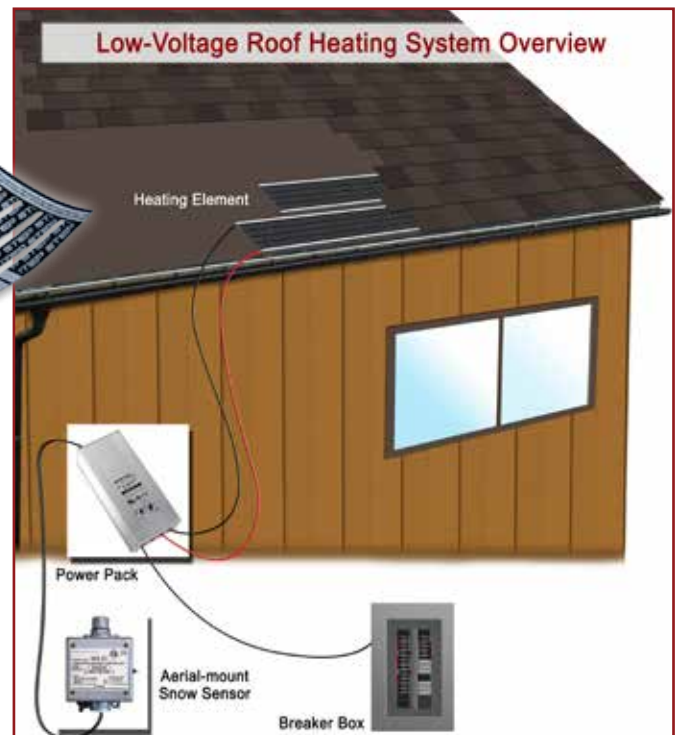
ProLine's innovative low-voltage roof deicing systems feature a unique, self-regulating, semi-conductive polymer heating element that is very thin and can be cut on site and discreetly nailed or stapled under shingles for quick, easy installation. The heating element is polypropylene fused during fabrication to achieve water proofing.



ProLine low-voltage roof heating element installed in roof valley.

The thin polymer heating element comes in widths of 3, 9 and 12-inches and can be nailed or attached with fasteners or screws under a variety of roofing materials, including shingles and metal.

The fully automated maintenance-free roof deicing system is one of the most advanced and efficient roof deicing systems available. The PTC nano-technology allows the elements to heat with maximum power in cold environments and use less electricity as they warm up. This minimizes power consumption and can reduce roof deicing costs by 30 to 60 percent compared to conventional cable systems.



Overview of ProLine low-voltage roof heating system (with element being installed under the shingles at the building's edge).



Low-voltage Roof Deicing System

Automated Roof Deicing System

How it Works

ProLine's roof deicing systems involve three main components: the polymer heating element, a step-down transformer, and an activation device (i.e., an aerial-mount snow switch and/or temperature sensor) that automatically triggers the system when weather conditions warrant.

The transformer is responsible for a specific section of the deicing system, and can step down from high voltage to low voltage (60 V or less). It is the source for monitoring the power and output to the system's heating element to ensure safe, accurate performance of the roof deicing system.

The activation device/snow sensor (typically mounted at the roof's edge) signals the control panel when weather conditions warrant. The sensor detects moisture and temperature, so when snow begins to fall and the temperature is below the set point (usually 39°F), the sensor signals the controller, which then sends power to the heating element to warm the roof.

Features and Benefits

- **Extremely Thin Profile** - The flexible heating element is just 3/64-inch, allowing for simple, discreet installation under roofing.
- **Self Regulating** - When the ambient temperature rises, the electrical resistance increases and the consumption of electricity decreases, preventing the element from overheating and ensuring energy-efficient operation.
- **Maintenance Free** - The system has no moving parts and is maintenance free.
- **Easy Installation** - Roll out the flexible heating element and cut to size while on the job site for a perfect fit.
Unlike many other roof heating systems, the low-voltage polymer heating element can be nailed or stapled through, simplifying the installation process.
- **Versatile** - ProLine Radiant's low-voltage system can be safely installed under most roofing materials, including metal.
- **Power Options** - The system operates on 24 volts (AC/DC) and can also be connected to a wind or solar power supply.
- **Protective Polypropylene Fabrication** - The product is polypropylene fused during fabrication to achieve water proofing.
- **Energy Efficient** - The roof heating system requires minimal power consumption. For even greater energy savings when heating metal roofs, use a heat retention mat.



Mountain cabin with low-voltage roof deicing system installed at the roof edges.

Low-voltage Roof Deicing System Specs



Heating Element Technical Data

Heating technology	Positive temperature coefficient (PTC) semi-conductive polymer
Width	12 inches (305 mm); Also available in widths of 3, 9 inches.
Thickness	3/64 inch (1.2 mm)
Length	Cut to order (maximum per strip: 32 feet (9.75 meters))
Secondary draw per foot	24 volts @ 68°F (20°C): 45 amps 24 volts @ 32°F (0°C): 54 amps
Warranty	10 years
Approvals	ETL listed; hazardous
Certifications	Class I, Div.2 Groups A,B,C,D Class II, Div.2 Groups F,G Class III

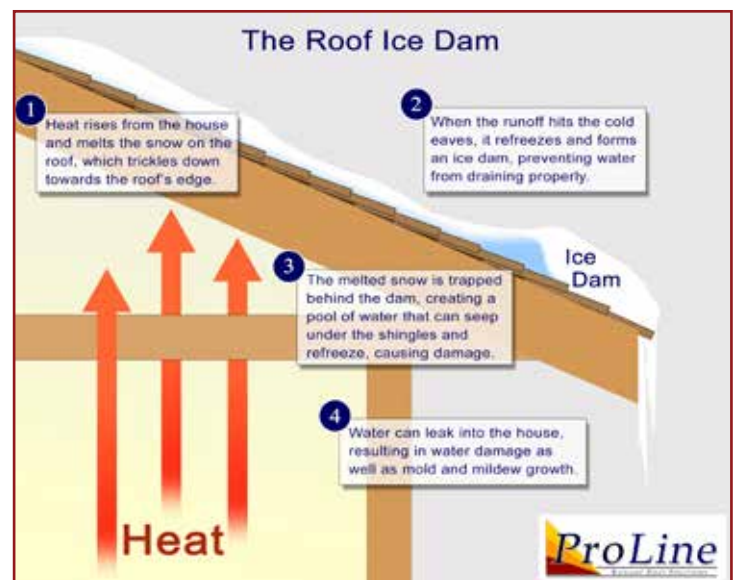


Illustration: How ice dams form on roof edges.

Power Supply Technical Data

Low-voltage dry type isolation power supply
Extruded aluminum profile enclosure with heat sink
120, 208, 240 VAC primary and 24 VAC secondary
Primary and secondary circuit protection
RoHS compliant interface board
2-year warranty



Heating element being installed under shingles.



PROLINE LOW-VOLTAGE ROOF HEAT ORDERING INFORMATION

Heating Element

Item Code	Description (width)	Output @ 68°F	Output @ 32°F	Voltage
PL-E-30-36W	12-inch wide heating element	11.0 W/ft.	13 W/ft.	120, 208-240
PL-E-30-70W	12-inch wide heating element	21.3 W/ft.	24 W/ft.	120, 208-240
PL-E-23-36W	9-inch wide heating element	11.0 W/ft.	13 W/ft.	120, 208-240
PL-E-23-80W	9-inch wide heating element	24.0 W/ft.	27 W/ft.	120, 208-240
PL-E-7-30W	3-inch wide heating element	9.5 W/ft.	11 W/ft.	120, 208-240

Power Supply

Item Code	Description	Amperage	Voltage
PL-LX-250	Power supply	1 x secondary circuit 25A	120, 240
PL-LX-500	Power supply	1 x secondary circuit 25A	120, 240
PL-LX-R-250	Power supply w/regulator, 250 W	1 x secondary circuit 25A	120, 240
PL-LX-R-500	Power supply w/regulator, 500 W	1 x secondary circuit 25A	120, 208-240
PL-LX-R-1000	Power supply w/regulator, 1000 W	2 x secondary circuit breakers	120, 208-240
PL-LX-R-1500	Power supply w/regulator, 1500 W	2 x secondary circuit breakers	120, 208-240

Controls

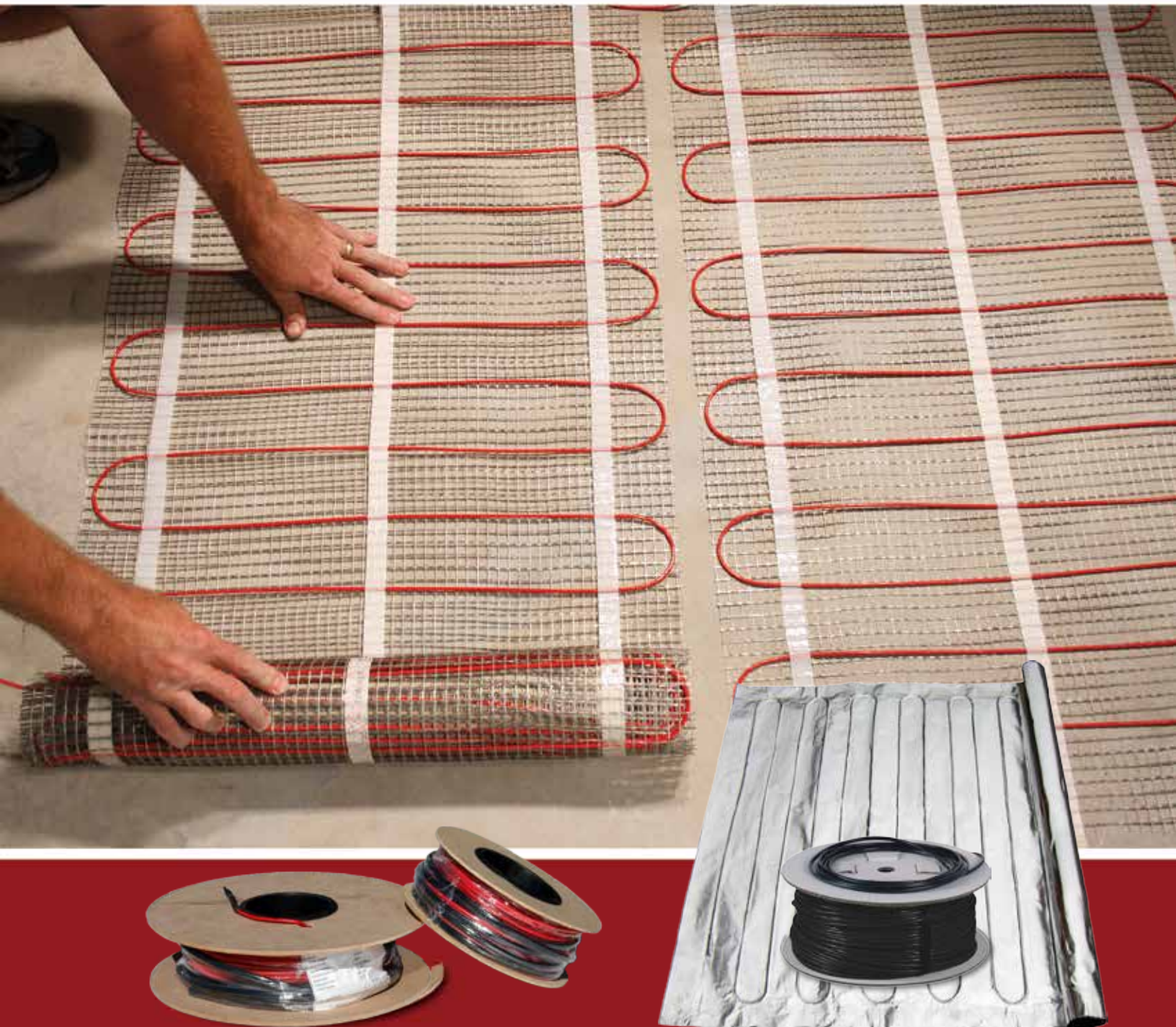
Item Code	Description	Voltage
WS-8C	Aerial mounted snow switch w/remote moisture sensor (30 Amps)	120-277
WS-AUX	Auxiliary control for aerial switch	
WS-50	50 feet of interconnect cable	
WS-100	100 feet of interconnect cable	
WS-200	200 feet of interconnect cable	
WS-115	Air sensing NEMA 4X outdoor thermostat	120-277
WS-115R	Surface sensing NEMA 4X outdoor thermostat	120-277

Accessories

Item Code	Description
PL-T-Block	Terminal block 2-bar
PL-TBE-4	Terminal enclosure
PL-TBE-6	Terminal enclosure
C&T-10	Connector and tape kit (10 pieces per pack.)
CON-DB	Connector DB TCU. (Priced per piece.)
TAPE-R	Sealant tape - roll
TCU14-Black/White	Tinned copper wire, 14 AWG. (Priced per foot.)
TCU12-Black/White	Tinned copper wire, 12 AWG. (Priced per foot.)
TCU10-Black/White	Tinned copper wire, 10 AWG. (Priced per foot.)
PL-3-Conductor	Signal wire from power supply. (Priced per foot.)
PL-TOOL	Crimp tool
PL-TAPE-10	Roll of double coated tape - 3 inches x 30 feet
PL-TAPE-5	Roll of double coated tape - 3 inches x 15 feet
PL-HRP	Polyurethane padding. (Priced per square foot.)

Floor Heating

RADIANT FLOOR HEATING SYSTEMS





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
- Safety approved for wet locations
- Flexible installation (easy to customize)
- Durable construction
- 25-year warranty

ProLine Radiant Floor Heating Mat

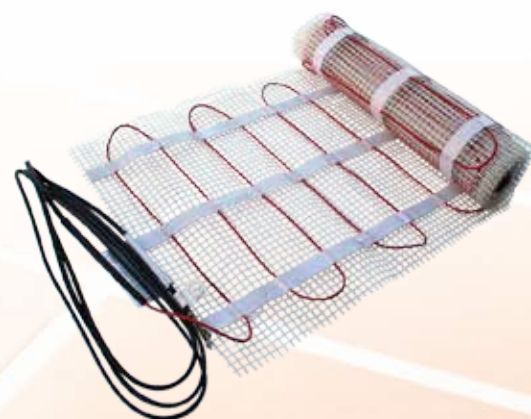
The ProLine floor warming system includes a heating cable that is pre-spaced on an adhesive backed fiberglass mesh that allows for quick, simple roll out installation.

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. ² (130W/m ²)±10% (at recommended spacing)
Output (mats)	12W/ft. ² (130W/m ²)±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

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
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
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

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

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			
TC20360	116.7	19	29	39	360	1.5	160
TC20600	194.5	32	49	65	600	2.5	96.0
TC20840	272.4	45	68	91	840	3.5	68.6
TC21080	350.2	58	88	117	1080	4.5	53.3
TC21440	466.9	78	117	156	1440	6.0	40.0
TC21790	580.1	97	145	193	1790	7.5	32.2
TC22090	678.4	113	170	226	2090	8.7	27.6
TC22630	851.8	142	213	284	2630	11.0	21.9
TC22840	922.2	154	231	307	2840	11.8	20.3

WARRANTY INFORMATION: ProLine Floor Heat Cable: 25-year limited warranty.



FoilHeat



ProLine Radiant FoilHeat Floor Warming System

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 illustration on page 43). The efficient floor heating system is ideal for heating any size or shape room, from basements and bedrooms to commercial offices, and more.

Heated Carpet and Laminate Flooring

FoilHeat is an ultra thin electric radiant floor heating system primarily for use under carpet, laminate, engineered wood and other floating floors. The principle advantages of using FoilHeat include ease of installation, rapid response time, and uniform heating of floor surfaces. The special design and aluminum construction help to eliminate 'hot-spots' or localized heating.

Specifications

Power	Available in 120 V and 240 V
Output rating	12 W/ft. ²
Thickness	⅜ 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

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

Right: ProLine's FoilHeat electric radiant floor warming system shown being installed to heat basement floor.

Some advantages of using FoilHeat include the ease of installation and uniform floor heating. The special materials used help to eliminate problems of 'hot-spots' or localized heating.



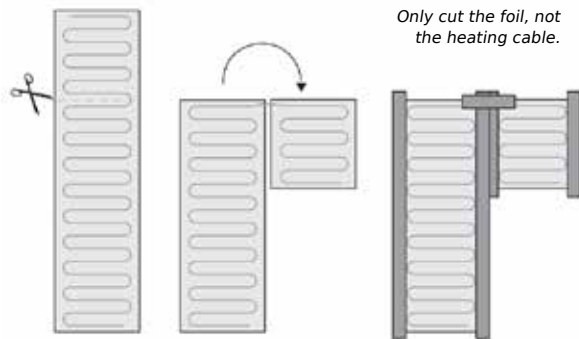
FoilHeat



FoilHeat Heating Element Construction

The heating element of the FoilHeat system is made with fluoropolymer insulated heating cables that are sandwiched between two layers of specially reinforced aluminum foil. The uniform spacing of the heating elements, further backed by the aluminum foil, ensures even heat distribution. The heating element is connected to a power-supply cable, which exits the laminate mat from one corner.

NOTE: Only cut the foil. DO NOT cut the actual heating cable.



FoilHeat mats can be easily cut on site.

The power lead is a thin flat two-core flexible cord, consisting of two insulated conductors with a metal sheath and an outer sheath. Depending on your heating requirement, FoilHeat is available in 120 and 240 volts at 12 watts per square foot. It is available in predetermined lengths with cold tail – prefabricated and tested in a carefully controlled factory environment.



When cutting the mat to make turns (see illustration to the left), be sure to cut the mat only. DO NOT cut or damage the heat cable.

PROLINE FOILHEAT ORDERING INFORMATION

All FoilHeat Mats are 20-inches wide

120 V FoilHeat Mats Sizing Guide (12 watts per square foot)

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

240 V FoilHeat Mats Sizing Guide (12 watts per square foot)

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

* Other sizes are available. For details, please contact ProLine.



Floor Heating

ProLine SLAB/STORAGE

Floor Heating Systems



Floor Heating Cable for Concrete Slabs

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 ½-inch 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

Designed to produce 10-15 watts per square foot, 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 \pm 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 K Ω) 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 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
PL-Strap	Cable strapping, 25 feet (7.6 m)
PL-Sensor	Replacement floor sensor for thermostat

ProLine Floor Heating Thermostats

Touch Screen Programmable Thermostat

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
- * Wi-Fi enabled model available



PRO Dual Sensing Programmable Thermostat

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.

- Simple user interface and thoughtful installation design
- Includes two sensors: a built-in air sensor (to measure room temperature) and a floor sensor with 10-foot (3-meter) cable to measure actual floor temperature.
- Pre-programmed for quick setup
- Monitored energy consumption
- Simple operation (Easy to use)
- Multi voltage: 120-240 VAC (includes 208 VAC)
- Output relay: 15A
- Large back-lit display for easy reading
- Serves as single thermostat for all applications (room, floor, room with floor limitation and as regulator)
- Class A GFCI: suitable for wet room installation



PRO Power Module Slave Relay

For large floor heating applications, the Power Module Slave Relay can be extended with additional Power Relay Modules. The PRO Slave 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



PRO Digital/Non-programmable Thermostat with Floor Sensor

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





Hydronic Radiant Heat - ProLine Products and Services

ProLine Radiant is a nationally recognized authority in the design and installation of hydronic radiant heating and solar hot-water systems. The products and services that ProLine offers are based on extensive training and years of field experience. ProLine is customer focused, consultative and unbiased in its product offerings, mechanical engineering services and installation approach. By utilizing ProLine's dedication and expertise, you can be confident in a complete and seamless radiant heat solution.

Preeminent Consulting and Analysis

ProLine provides free, no obligation consulting services by experienced professionals to ensure that you'll receive a thorough, upfront analysis of your project. We evaluate every aspect of the system to offer the best, complete solution to meet your specific needs.

Wide Selection of Proven Products

ProLine offers a wide selection of the industry's most reputable solutions - all at competitive pricing.

ProLine system components are at the top of their class, so you can be assured that your radiant heat system consists of the most trusted components. From boilers and manifolds to pumps and controls, your system will consist of the very best in each category.

The Radiant Heat Information Authority

ProLine makes the process of finding, purchasing and installing radiant heat systems easy for construction professionals. ProLine works directly with installers to make these systems a reality.



Complete Design and Engineering Services

You will receive a comprehensive set of engineering drawings that accurately describe each component of the system and give you a visual perspective on every key process. The hydronic services include:

- Tubing Installation (spacing, sizing, lengths)
- Manifold Placement
- Under Slab Insulation
- Distribution Line Installation (size, lengths)

Mechanical Equipment

- Boiler Systems
- Pump Boards
- Pipe Configurations
- Controls

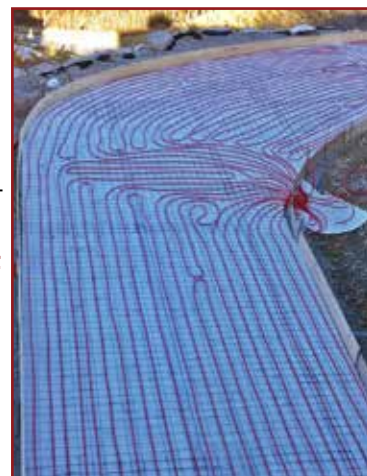
Unmatched Installation Support

In addition to access to mechanical engineers and electricians, you can request an experienced radiant heat installer to come to your location and supervise the installation. Or, for a complete turnkey solution, you may request for ProLine to provide an entire hydronic installation crew.

"By working with ProLine, I feel like I have the best radiant heat partner working with me, so I never feel alone during the installation process. The designer, engineer and electrician are always there for me if I have any questions or needs. Their expertise ensures that the installation goes smoothly and the customer is satisfied."

David V. - Landscape

Left: ProLine Radiant hydronic snow melting system's mechanical / boiler room and photo of system installed under pavers.





Your Local ProLine Radiant Dealer

Your Complete Radiant Heat Solutions Provider

Residential, Commercial and Industrial Radiant Heat Applications

Residential Snow Melting

Heated Driveways
Porches and Steps
Ramps and Entry Ways
Sidewalks, Patios and Custom Walkways
Parking Areas
Portable Snowmelt Solutions
Custom Snow Melting Solutions

Radiant Heated Floors

Radiant Heat for all Types of Floor Surfaces
Retrofit Systems for Heating Existing Floors
Hydronic and Electric Floor Heating Solutions
Self-regulating Systems

Included Services and Capabilities

Free Professional Consulting (508-379-6038)
Complete System Design and Engineering
Industry-leading Customer Service
Post-sales Technical Support
Most Advanced, Proven Products
Technical / Installation Support
Free Product and Installation Training
Free Quotes

Commercial Snow Melting

Critical, High-traffic Areas
Ramps and Loading Docks
Outdoor Shopping Malls
Sidewalks and Parking Areas
Federal Government Facilities
State Transit Authorities / Platforms
Helicopter Pads
Custom Snowmelt Applications
Hydronic and Electric Snowmelt Systems

Roof Heating Solutions

Complete Roof Deicing Systems
Gutter Melt and Downspout Heating
Roof Edge (Panel) Heating
Most advanced Low-voltage Roof Heating

ProLine Radiant specializes in providing custom radiant heat systems to match the specific demands of your project. If you have any type of heating need, contact ProLine today and let us help.

With its focus on preeminent customer service and a wide offering of proven products, ProLine Radiant has established itself as a leading provider of complete interior and exterior radiant heat solutions throughout the United States and Canada.

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