ProLine

RADIANT HEAT SOLUTIONS

PRODUCT

CATALOG

Toll Free: 866.676.9276 WWW.PROLINERADIANT.COM sales@prolineradiant.com

ProLine Radiant Product Catalog

Contents

ProLine Radiant Location and Contact Information

Address:
1461 East 840 North
Orem, UT 84097

Phone:
Toll Free: 866.676.9276
Fax: 801.948.7599

Email and Internet:
sales@prolineradiant.com
www.prolineradiant.com

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

supports green power

ProLine
RADIANT HEAT SOLUTIONS

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 industrial and 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 work closely with you to match the best radiant heat system to your needs and budget. ProLine provides the support necessary for you to have a successful installation including; unmatched system design/layout and engineering services, as well as expert installation training and support.

Our superior customer and installation support 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 knowledge-able 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.prolineradiant.com) and then call us toll free at **866.676.9276** 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 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.prolineradiant.com. Or for more information, call ProLine Radiant at **866.676.9276** today.

To submit your project for a design/quote, email your project information to ProLine Radiant at sales@prolineradiant.com.

ProLine
RADIANT HEAT SOLUTIONS

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

Project Photos

Roof deicing heat cable installed in commercial gutter heat trace application.

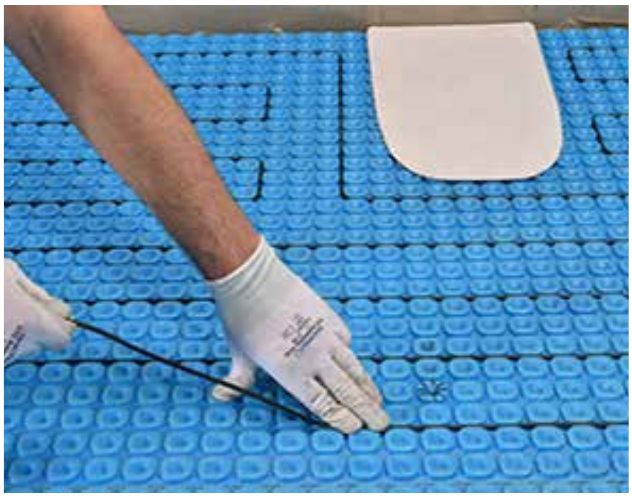
Radiant floor heating mats.

Radiant heated driveway.

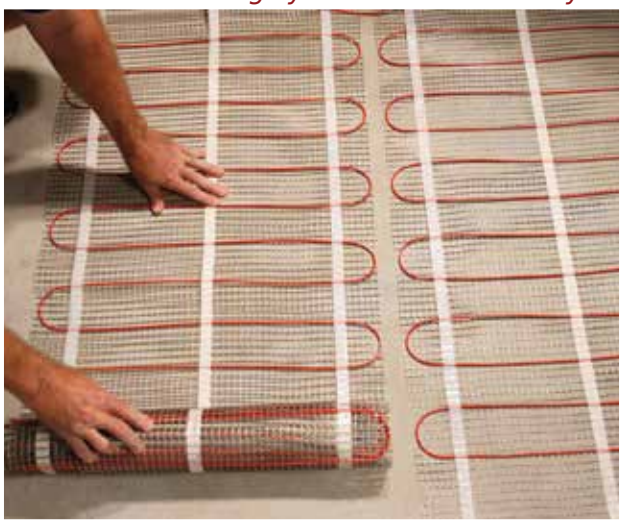
Heated tire tracks in asphalt driveway.

Low-voltage roof deicing system heating roof valley and edge.

Snow melting system installed in city sidewalks.



Installing heat cable in Prodeso® membrane.



Floor heating mats being installed.

Snowmelt system installed in parking lot ramp.

Pipe tracing system installed.

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 system layouts, ProLine offers free installation training courses with certificates of completion. And should you need, ProLine electrical experts 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 the project's specific needs. The 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, floor heating, and pipe tracing system installation.

Installers who successfully complete the FREE 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.

Sign up today for free installation training at prolineradiant.com.

Installation Support Services

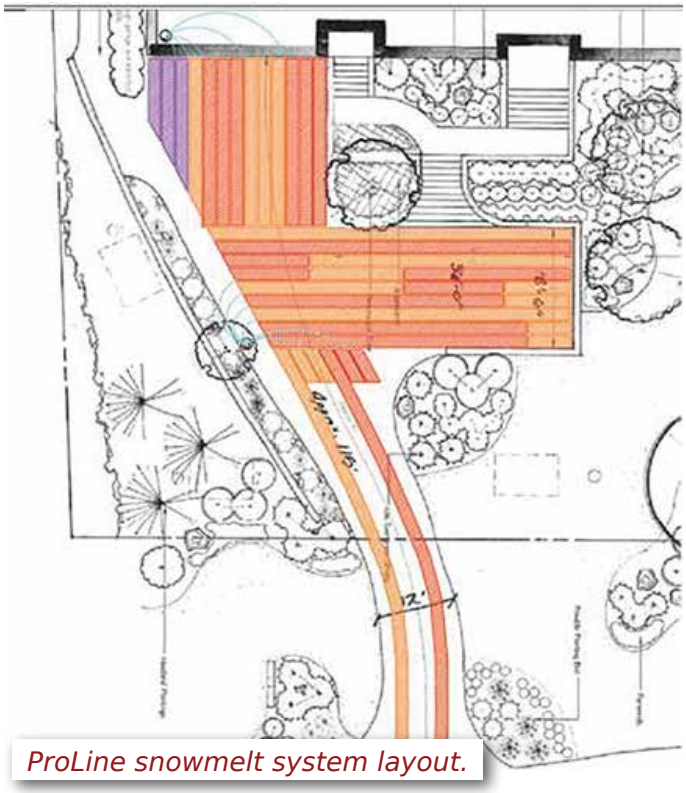
ProLine Radiant's installation support services further distinguish it from other manufacturers and wholesale distributors. ProLine Radiant provides a dedicated staff of experts to assist you throughout the installation process. This valuable resource gives your business a wealth of expertise to draw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

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.

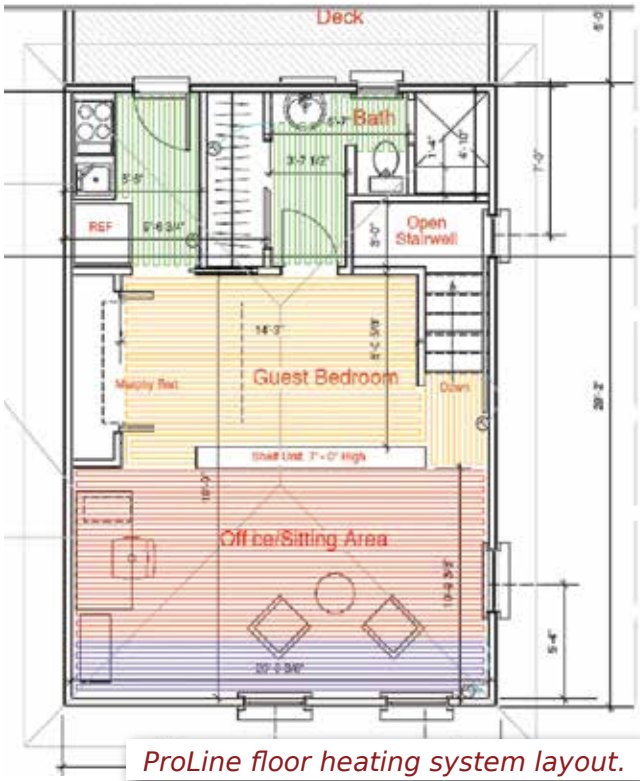
ProLine
RADIANT HEAT SOLUTIONS

ProLine Provides System Engineering and Shop Drawings

Professional Design Services

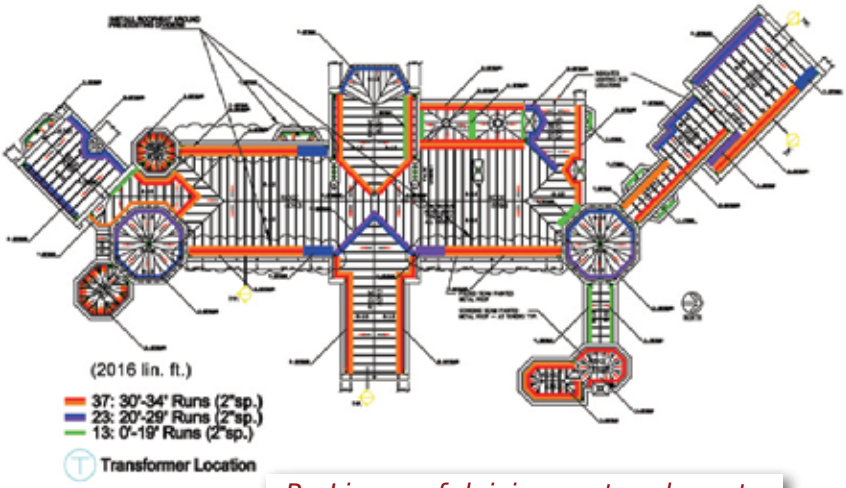


ProLine snowmelt system layout.

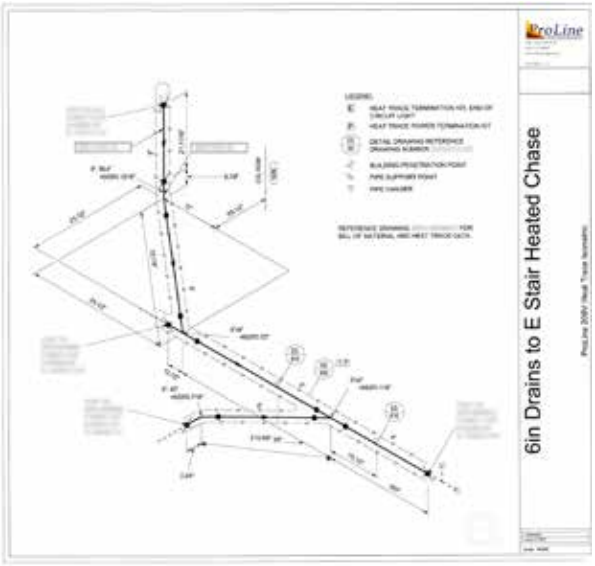


ProLine floor heating system layout.

Complete system layouts and installation support with each job!



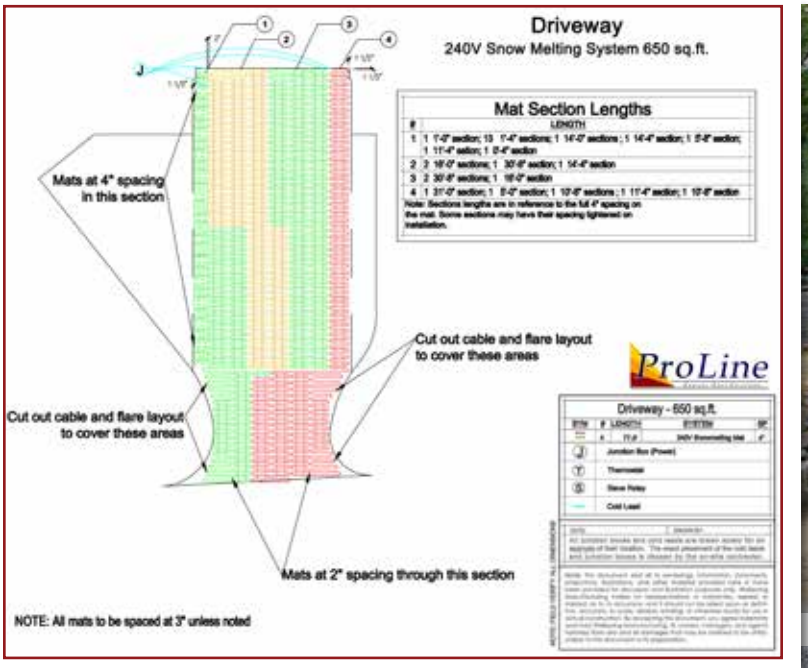
ProLine roof deicing system layout.



ProLine pipe trace system layout.

Heated Driveway Design and Installation

AutoCAD® Design and Installation Photos of a Heated Paver Driveway



ProLine Radiant
1461 East 840 North
Orem, UT 84097 USA
Phone: 801.948.7600
Fax: 801.948.7599
Toll free: 866.676.9276

ProLine
Radiant Heat Solutions

Snow Melting

RADIANT SNOWMELT SYSTEMS

ProLine

RADIANT HEAT SOLUTIONS

Heated Driveways and Snow Melting 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. Snow melting cable is available as free standing cable as well as cable 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.

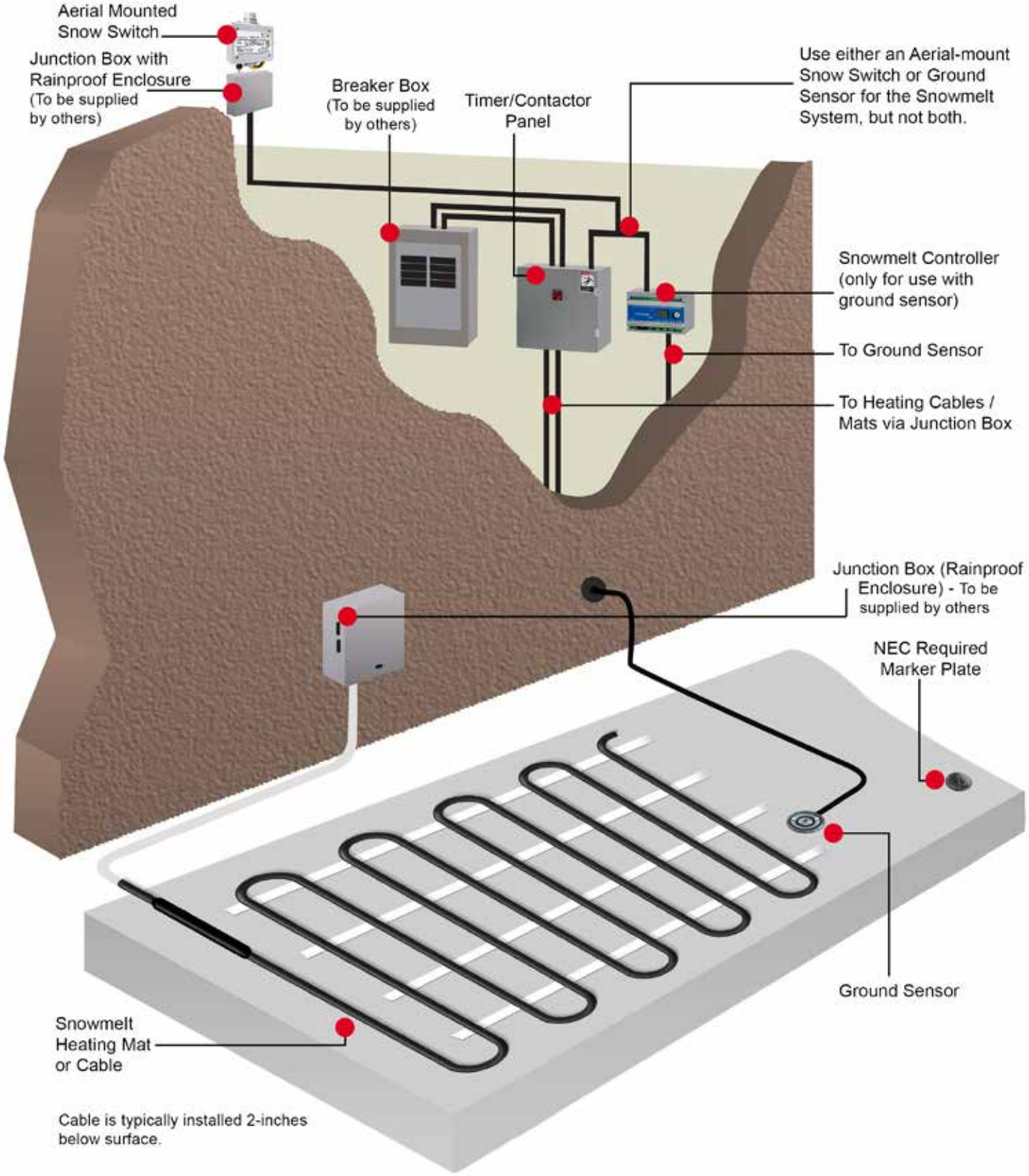
Features Include:

- 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	208-600 V (For 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



ProLine
Radiant Heat Solutions

Exterior Radiant Heat Controls

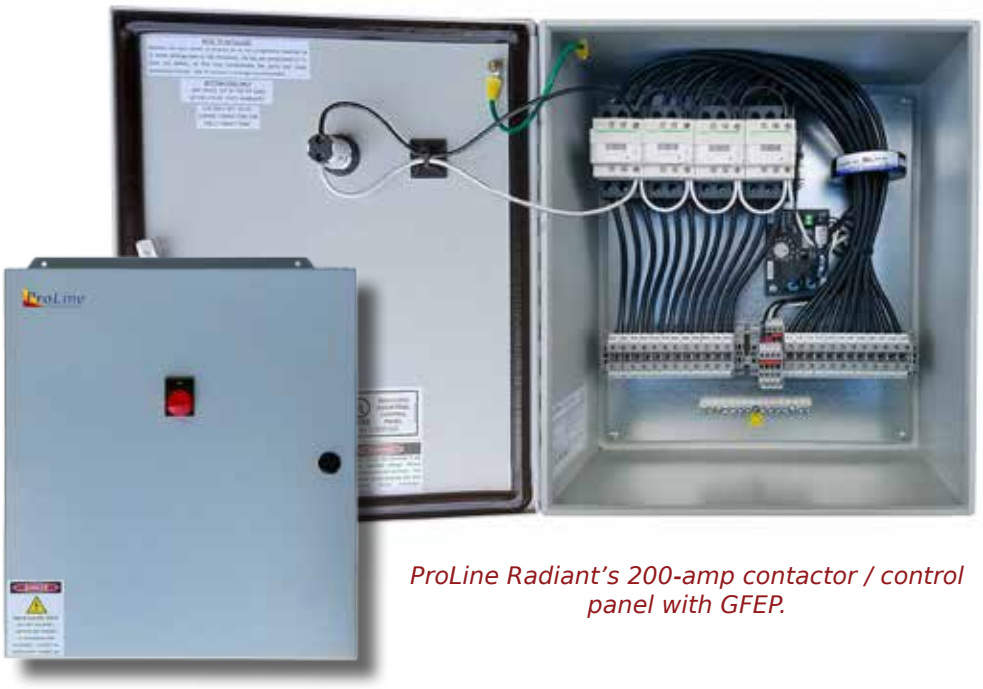
ProLine Offers Contactor Panels with and without GFEP

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

Features and Benefits

- NEMA 4, UL listed panel box
- Low cost
- Easy to install
- Integrated 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
- Single and 3-phase
- Two or four 50-amp contactors
- Two, four or eight 30-amp contactors

ProLine’s 100-amp contactor panel without GFEP.



ProLine Radiant’s 200-amp contactor / control panel with GFEP.

Contactor panel being installed.

Exterior Radiant Heat Controls

Snowmelt System Controller

The ProLine Radiant snowmelt control units are NEMA 1, wall-mounted controls that features manual override capability, allowing you to activate the system to melt snow drifts or ice that has formed due to wind or shade. The units also allow for control from an external signal (day/week timer, GSM-module or other signal source).

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, CSA 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 50°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: 1.8" (90 mm x 156 mm x 45 mm)
Dimensions (including cover)	H: 10.4" W: 6.4" D: 3.6" (263 mm x 162 mm 91 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	82 feet (25 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 Snow Melting System Activation Devices

Snow Sensor Technical Data and Specifications

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.

WS-2C Specifications	
Dimensions	4¾"x7"x2¾" (120 mm x 178 mm x 70 mm)
Weight	2 lbs. (0.9 Kg)
Operating temp	-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) Adjustable
Delay off (controller)	30-90 Minutes field selectable
Load capacity	30A @ 240 VAC / 100,000
Monitor contact	24 VDC/VAC 400mA 10 W Total

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.

WS-5C Specifications	
Dimensions	4¾”x7”x2¾” (120 mm x 178 mm x 70 mm)
Weight	2 lbs. (0.9 Kg)
Operating temp	-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) Adjustable
Delay off (controller)	30-90 Minutes field selectable
Load capacity	2x30A @ 240 VAC / 100,000
Monitor contact	24 VDC/VAC 400mA 10 W Total

The WS-8C Aerial Snow Sensor - The WS-8C is designed for gutter, down-spout, and roof ice melting and small satellite antenna deicing. The 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.

WS-8C Specifications	
Dimensions	4¾”x7”x2¾” (120 mm x 178 mm x 70 mm)
Weight	2 lbs. (0.9 Kg)
Operating temp	-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 temp	34° to 44°F (1.1° to 6.6°C) Adjustable
Delay off	30-90 Minutes field selectable
Load capacity	30A @ 240 VAC / 100,000

ProLine Snowmelt System Controls

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.

ProLine WS-AUX Snow Sensor Control Display 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.

ProLine's WS-AUX shown with interconnect cable attached.

The control display panel brings control and monitoring of your snowmelt system indoors, providing remote monitoring and controlling of the attached sensor. The user may monitor both the operating mode and the activation state of the sensor. The sensor may also be set to automatically operate or to prohibit automatic operation, 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. The Control Display Panel is designed for use either indoors or outdoors with proper protection from the elements.

The WS-AUX is compatible with the WS-2C, WS-5C, and WS-8C rain/snow sensor controllers. The 2.5 ounce unit consists of an electronic printed circuit board mounted securely to a steel mounting plate, and fits into a standard single-gang or multi-gang electrical enclosure.

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 systems are fully automated and feature the industry's most trusted heating elements, activation devices and controls.

WS-AUX Specifications	
Dimensions	4.1"x 1.8"x 0.9" (104 mm x 45 mm x 23 mm)
Weight	2.5 ounces
Operating temp	-40° to 185°F (-40° to 85°C)
Enclosure	Fits into a standard single-gang or multi-gang electrical enclosure
Supply power	Derives its power from the snow sensor, requiring no batteries or AC power
Push-button functions	STANDBY, AUTOMATIC, and MANUAL ON

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

ProLine WS-AUX Interconnect Cable

To connect the snow sensor and the WS-AUX, an appropriate 5-conductor cable is required. ProLine Radiant provides the recommended interconnect cable, which is shielded, stranded, tinned, with 22 AWG (0.5 mm^2). The individual leads of the interconnect cable are installed into the rear terminal block of the WS-AUX (see image above) and the cable is then connected to the snow sensor. When using ProLine's shielded interconnect cable, the WS-AUX can be installed as much as 500 feet away from the snow sensor. (Available in 50-, 100- and 200-foot lengths.)

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 and mat sizes are listed below. To order 277, 600 V, and other size mats and cables, please contact your ProLine representative.*)

Snow Melting Mats

208 Volt Mat (50 W per square foot)

Item Number	Mat Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM85052500	10	5	500	2.4	86.5
SM8501121000	20	11	1,000	4.8	43.3
SM8501621500	30	16	1,500	7.2	28.8
SM8502222000	40	22	2,000	9.6	21.6
SM8502722500	50	27	2,500	12.0	17.3
SM8503323000	60	33	3,000	14.4	14.4
SM8503823500	70	38	3,500	16.8	12.4
SM8504424000	80	44	4,000	19.2	10.8
SM8504924500	90	49	4,500	21.6	9.6
SM8505525000	100	55	5,000	24.0	8.7
SM8506025500	110	60	5,500	26.4	7.9
SM8506526000	120	65	6,000	28.8	7.2

240 Volt Mat (50 W per square foot)

Item Number	Mat Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM25052500	10	5	500	2.1	114.3
SM2501121000	20	11	1,000	4.2	57.1
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

480 Volt Mat (50 W per square foot)

Item Number	Mat 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

208 Volt Mat (37 W per square foot)

Item Number	Mat Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM837112750	20	11	750	3.6	57.7
SM2373022000	54	30	2,000	9.6	21.6
SM2375123500	94	51	3,500	16.8	12.4
SM2376524500	120	65	4,500	21.6	9.6
SM2378025500	146	80	5,500	26.4	7.9
SM8378726000	160	87	6,000	28.8	7.2

240 Volt Mat (37 W per square foot)

Item Number	Mat Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM237112750	20	11	750	3.1	77.4
SM2373022000	55	30	2,000	8.3	28.9
SM2375123500	95	51	3,500	14.6	16.4
SM2376524500	120	65	4,500	18.8	12.8
SM2378025500	150	80	5,500	22.9	10.5

Snow Melting Mats for Asphalt

240 Volt (37 W per square foot)

Item Number	Mat Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SMA237112750	20	11	750	3.1	77.4
SMA2373022000	55	30	2,000	8.3	28.9
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

C US

ProLine 10 YEAR WARRANTY

Proline Snow Melting Ordering Information

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	77.4
SC2841000	84	20	27	1,000	4.2	57.1
SC21682000	168	40	55	2,000	8.3	28.9
SC22092500	209	50	70	2,500	10.4	23.1
SC22933500	293	70	95	3,500	14.6	16.4
SC23754500	375	90	125	4,500	18.8	12.8
SC24585500	458	110	150	5,500	22.9	10.5

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

Item Number	Cable Length (Feet)	Approximate Heat Coverage (Square feet)		Watts (12W/ ft.)	Amps	Ohms
		3-inch spacing (50 Watts Sq. ft.)	4-inch spacing (37 Watts Sq. ft.)			
SC843500	43	10	14	500	2.4	86.5
SC8861000	86	20	29	1,000	4.8	43.3
SC81271500	127	30	42	1,500	7.2	28.8
SC81702000	170	40	57	2,000	9.6	21.6
SC82132500	213	50	71	2,500	12.0	17.3
SC82563000	256	60	85	3,000	14.4	14.4
SC82993500	299	70	100	3,500	16.8	12.4
SC83404000	340	80	113	4,000	19.2	10.8
SC83834500	383	90	128	4,500	21.6	9.6
SC84265000	426	100	142	5,000	24.0	8.7
SC84695500	469	110	156	5,500	26.4	7.9
SC85126000	512	120	171	6,000	28.8	7.2

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	46.1
SC44695500	469	110	156	5,500	11.5	41.9

Mesh-Up Support Chairs

Mesh-Up plastic supports are used to keep remesh and heat cable off the ground before and during concrete pouring. The support snaps easily and firmly to remesh where the wires intersect; preventing it from rotating, shifting or becoming displaced. The Mesh-Up “flexes” during concrete pours before gradually restoring to its original shape. This reduces the stress placed on the wire mesh and helps prevent it from bending or being damaged, helping to ensure top-quality concrete work.

Fully Automated Snow Melting Systems

ProLine
Radiant Heat Solutions

ProLine Radiant
1461 East 840 North
Orem, UT 84097 USA

Phone: 801.948.7600
Fax: 801.948.7599
Toll free: 866.676.9276

ProLine
Radiant Heat Solutions

Roof Heating

SELF-REGULATING HEAT TRACE CABLE AND LOW-VOLTAGE ELEMENT

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-regulating 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 -40°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.

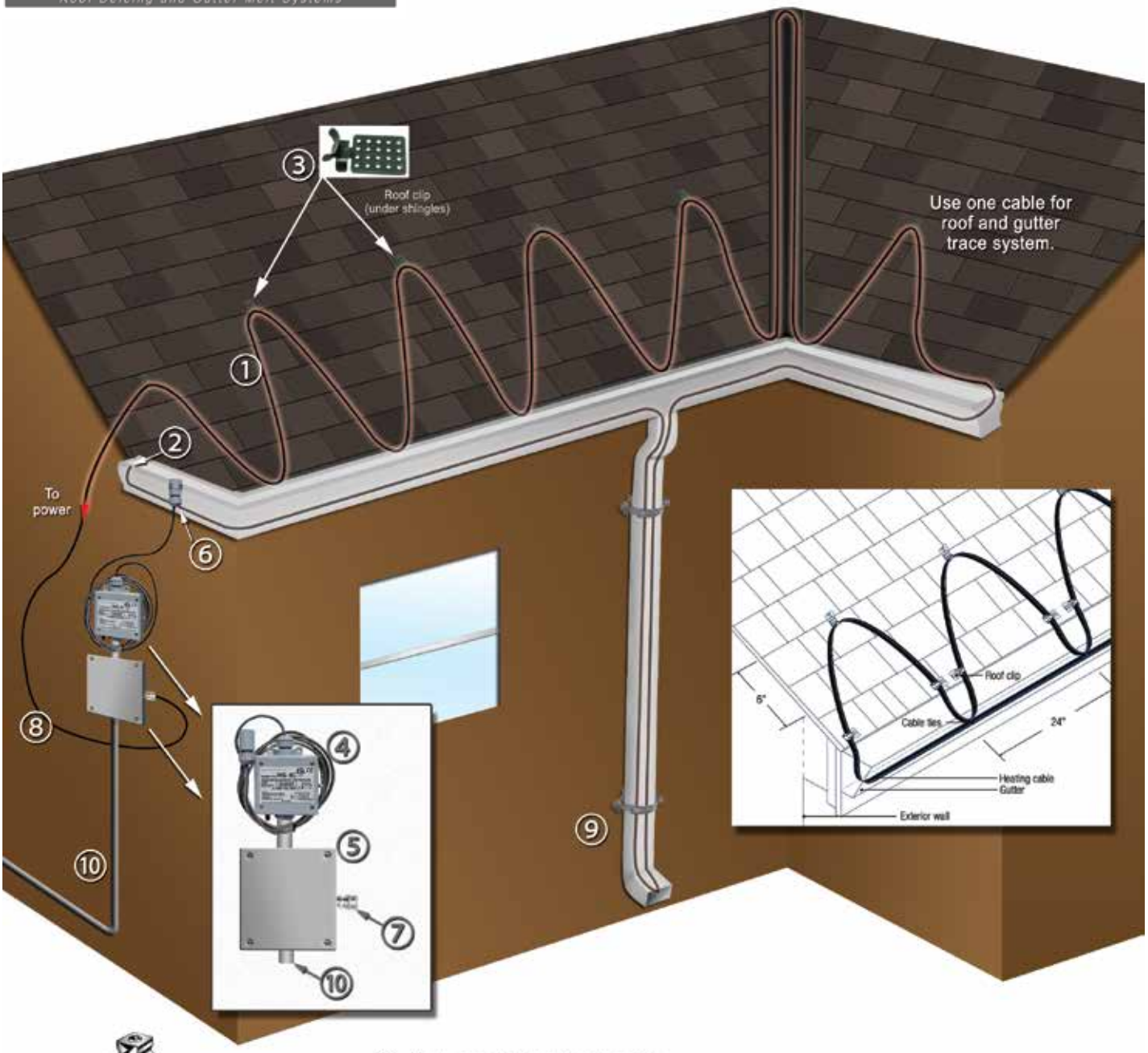
"In all the years I've been installing radiant heating systems, I've noticed that "bubbles" in the outer jacket of the cable almost always result in a point of failure. The superior outer jacket of ProLine's self-reg cable helps to eliminate this problem."

– Eric W., Licensed Contractor

Self-Regulating Heat Cable System Overview

ProLine
Radiant Heat Solutions
Roof Deicing and Gutter Melt Systems

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.



① Self-regulating heat cable
② End seal (termination) kit
③ Roof cable clips, manufactured for superior performance (under shingles)
④ Snow sensor or thermostat (WS-8 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

ProLine
Radiant Heat Solutions

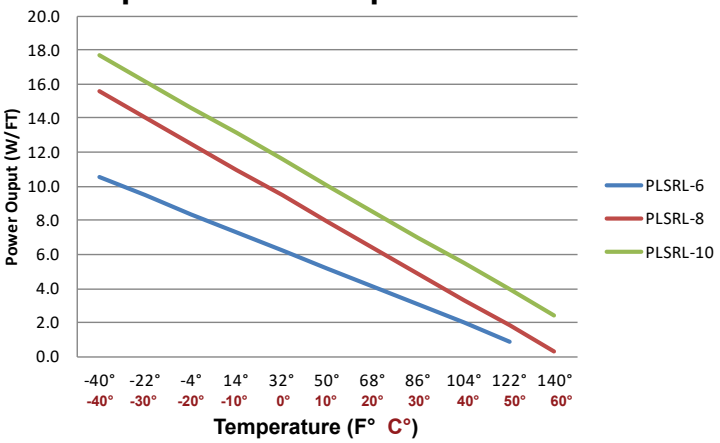
PLSRL Heat Trace Cable Data Sheet

PLSRL self-regulating heat cable is a popular 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, 208-277 V
Maximum maintain or continuous exposure temperature (power on)	+149°F (65°C)
Maximum intermittent exposure temperature 1,000 hours (power on/off)	+185°F (85°C)
Minimum installation temperature	-40°F (-40°C)
Protective braid resistance	<18.2Ω/km
Bus wire gauge	16 AWG
Approvals	cULus; CE, ATEX, IECEx, EAC
Warranty	2 years (Not prorated)

Power Output Curves

Watts per Foot vs. Temperature



Maximum Length (feet) vs Circuit Breaker Size

Cable	Startup Temp.	120 V				240 V			
Breaker Size		15A	20A	30A	40A	15A	20A	30A	40A
PLSRL-6-1 and PLSRL-6-2	50°F (+10°C)	230	270	270	270	460	540	540	540
	32°F (0°C)	230	270	270	270	460	540	540	540
	14°F (-10°C)	180	210	270	270	360	420	540	540
	0°F (-18°C)	140	190	270	270	285	380	540	540
	-20°F (-29°C)	125	165	250	270	250	330	500	540
	-40°F (-40°C)	110	145	220	270	220	295	440	540
PLSRL-8-1 and PLSRL-8-2	50°F (+10°C)	150	200	210	210	300	400	420	420
	32°F (0°C)	150	200	210	210	300	400	420	420
	14°F (-10°C)	140	150	205	210	280	300	410	420
	0°F (-18°C)	100	130	200	210	200	265	400	420
	-20°F (-29°C)	85	115	175	210	175	235	350	420
	-40°F (-40°C)	80	105	155	210	155	210	315	420
PLSRL-10-1 and PLSRL-10-2	50°F (+10°C)	120	160	180	180	240	315	360	360
	32°F (0°C)	105	140	170	180	210	280	340	360
	14°F (-10°C)	95	125	165	180	190	250	330	360
	0°F (-18°C)	80	110	160	180	160	215	325	360
	-20°F (-29°C)	70	95	140	180	145	190	285	360
	-40°F (-40°C)	60	85	125	170	125	170	255	340

PLSRL Cable Dimensions

Type	Dimensions	Minimum Bend Radius
PLSRL-CR	10.9 x 6.0 mm	1.4 inches (36 mm)

Ordering Information

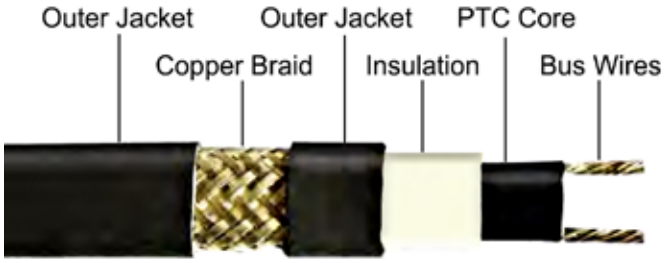
PLSRL- ☐ - ☐ - ☐ For example: PLSRL-6-2-CR

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



PLSRL self-regulating heat cable.

Approvals:

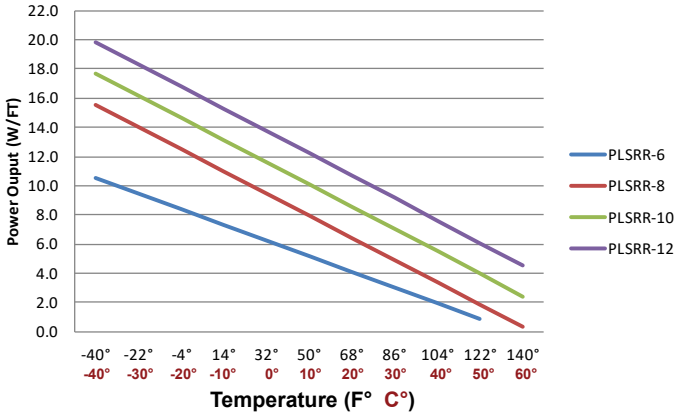
PLSRR Heat Trace Cable Data Sheet

PLSRR is self-regulating heat cable that is used for roof/gutter 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. (ProLine's PLSRR heat trace cable features a NON-PRORATED 10-year warranty.)

Technical Data for PLSRR Heat Cable	
Service voltage	110-120 V, 208-277 V
Maximum maintain or continuous exposure temperature (power on)	+149°F (65°C)
Maximum intermittent exposure temperature 1,000 hours (power on/off)	+185°F (85°C)
Minimum installation temp.	-40°F (-40°C)
Protective braid resistance	<18.2Ω/km
Bus wire gauge	16 AWG
Approvals	cULus; hazardous, CSA, ATEX, IECEx
Warranty	10 years (Not prorated)
Certifications	Class I, Div.2 Groups A, B, C, D Class II, Div.2 Groups E, F, G Class III

Power Output Curves

Watts per Foot vs. Temperature



Roof Deicing

Maximum Length (feet) vs Circuit Breaker Size

Cable	Startup Temp.	120 V				240 V			
Breaker Size		15A	20A	30A	40A	15A	20A	30A	40A
PLSRR-6-1 and PLSRR-6-2	50°F (+10°C)	230	270	270	270	460	540	540	540
	32°F (0°C)	230	270	270	270	460	540	540	540
	14°F (-10°C)	180	210	270	270	360	420	540	540
	0°F (-18°C)	140	190	270	270	285	380	540	540
	-20°F (-29°C)	125	165	250	270	250	330	500	540
	-40°F (-40°C)	110	145	220	270	220	295	440	540
PLSRR-8-1 and PLSRR-8-2	50°F (+10°C)	150	200	210	210	300	400	420	420
	32°F (0°C)	150	200	210	210	300	400	420	420
	14°F (-10°C)	140	150	205	210	280	300	410	420
	0°F (-18°C)	100	130	200	210	200	265	400	420
	-20°F (-29°C)	85	115	175	210	175	235	350	420
	-40°F (-40°C)	80	105	155	210	155	210	315	420
PLSRR-10-1 and PLSRR-10-2	50°F (+10°C)	120	160	180	180	240	315	360	360
	32°F (0°C)	105	140	170	180	210	280	340	360
	14°F (-10°C)	95	125	165	180	190	250	330	360
	0°F (-18°C)	80	110	160	180	160	215	325	360
	-20°F (-29°C)	70	95	140	180	145	190	285	360
	-40°F (-40°C)	60	85	125	170	125	170	255	340
PLSRR-12-1 and PLSRR-12-2	50°F (+10°C)	80	140	150	150	160	270	310	310
	32°F (0°C)	75	130	145	150	150	260	290	310
	14°F (-10°C)	70	115	142	150	140	230	285	310
	0°F (-18°C)	60	80	140	150	120	160	280	310
	-20°F (-29°C)	50	65	110	150	105	140	225	310
	-40°F (-40°C)	45	60	90	140	90	125	190	280

Approvals:

Ordering Information

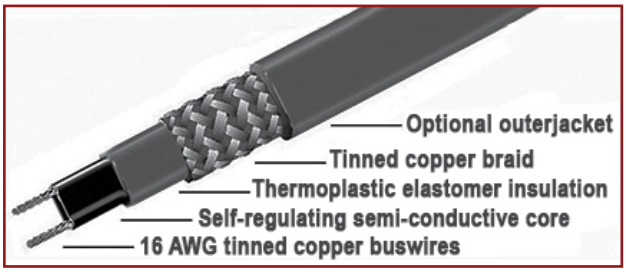
PLSRR- ☐ - ☐ - ☐ For example: PLSRR-8-2-CR

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.

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)

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. (Optional GFCI plus available.)

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 (For 208-277 V, please call)
Protective braid resistance	< 18.2Ω/km
Cold lead length	6 feet with plug
Electrical classification	Non-hazardous; ordinary areas
Exposure to chemicals	None
Warranty	2-years

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.

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

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.

Roof Deicing Control Options

Self-regulating Heat Trace Cable

In addition to ProLine's industry leading self-regulating heat trace cable and professional system design/layout, users also have several activation device/controller options to ensure optimum performance of the roof deicing system.

WS-8C Aerial Mount Sensor (WS-8C) - 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 (WS-115) - 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-115R Outdoor Surface Sensing Thermostat (WS-115R) - 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-115 and 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 and 40°F - 110°F.
- 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.

Industrial Electronic Thermostat (WS-IET) - The IET is a microprocessor-based temperature controller designed to provide on/off control for commercial heating, cooling, air conditioning and refrigeration applications. Its comprehensive functionality makes the IET is one of the most versatile temperature controls available.

The IET features a lockable front-panel touchpad and a Liquid Crystal Display (LCD) for viewing the temperature and status of other functions. The digital display and keypad allow precise temperature settings.

When not in the programming mode, the display provides a constant readout of the sensor temperature. Annunciators on the liquid crystal display indicate when the relay is energized. The IET is also equipped with diagnostic programs that check for hardware, software or system problems and display different error codes to indicate the problem and its location.

Roof Heating

Cable Accessories and Connections

PLSR12 - End seal kit

A Heat shrinkable tubes (2)
B Woven braids (2)
C Heat shrink end caps (2)

VHBPad - Pad for metal roof

A Double-sided 3x2-inch VHB Pad for metal roofs - (25 per package)

PLSR14 - Roof clips

A Roof clips - 50 per bag

PLSR15 - Downspout hanger kit

A Hanger bracket
B Clamp ties

PLSR10 - Splice / tee kit - with single end seal 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 ⅛" diameter)
E Heat-shrinkable tube (1" long x ½" diameter)
F Uninsulated braid crimp
G Cable ties
H Insulated bus wire crimps
I Black cloth tape (6" long)
J Heat-shrinkable cap
K Heat-shrinkable tube for ground

PLSR00 - Power connection kit - with single end seal kit

A Black-shrinkable tube (2) (5½" long x ⅛" diameter)
B Green-shrinkable tube (6" long x ¼" diameter)
C Black heat-shrinkable tube (1" long x ½" diameter)
D Seal fitting and black grommet
E Mounting bracket for piping
F Gasket
G Lock nut
H Grommet
I Wire nuts (3)
J Labels (4)

PLSR Cable Accessories and Controls

Item Number	Description
PLSR00-Power	Power connection kit
PLSR08	Plug-in cord set, 120 V GFCI, 100 ft. maximum run length
PLSR10	Splice / tee kit
PLSR12	End seal kit (2 end seals)
PLSR14	Roof clips - 50/bag
VHBPad	3"x2" pad - 25/pack
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)
WS-IET	Industrial electronic temperature controller

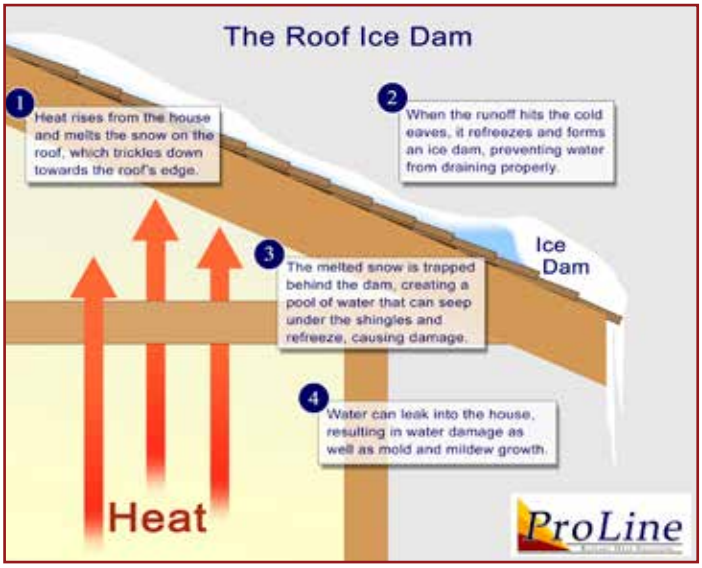
Commercial offices with the low-voltage roof heating system installed to heat the roof valleys and along the roof edges.

ProLine
RADIANT HEAT SOLUTIONS

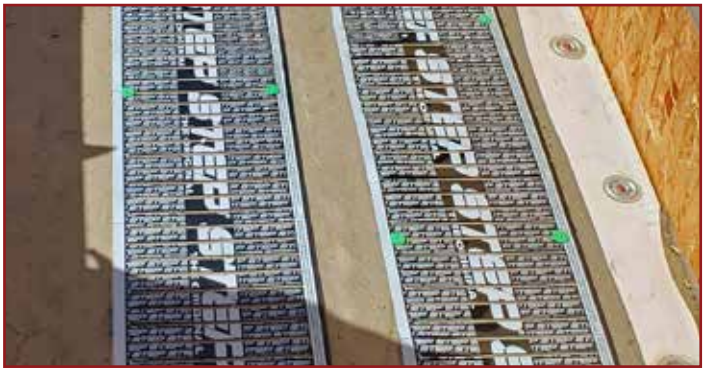
Low-Voltage Roof Deicing Systems

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. The element can be nailed or stapled under shingles and metal roofs for quick, discreet, easy installation. The heating element is protected by one layer of polyethylene for resistance against water and a second layer of polypropylene to protect against chemicals and can be installed under all types of roofing materials.

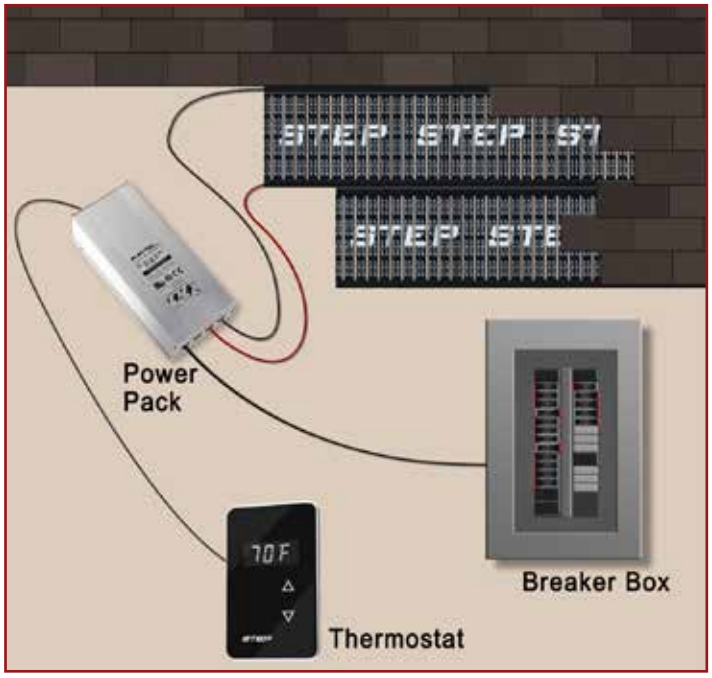


How ice dams form on roof edges.



Heating element being installed under a metal roof at a public library.

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



Overview of ProLine low-voltage roof heating system with element being installed under the shingles.

Low-voltage Roof Deicing System

Automated Roof Deicing System

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** - Because the radiant heating system has no moving parts, it is reliable and maintenance free.
- **Easy Installation** – Roll out the flexible heating element and cut to size while on the job site for a perfect fit.

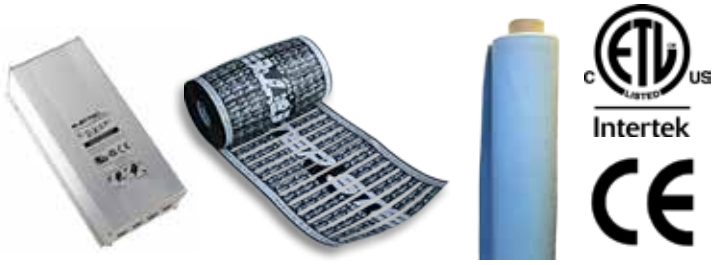
  Unlike many other roof heating systems, the low-voltage polymer heating element can be nailed or stapled through, simplifying the installation process.
- **Versatile** - ProLine Radiant's low-voltage system can be safely installed under most roofing materials, including metal.
- **Power Options** - The system operates on 24 volts (AC/DC) and can also be connected to a wind or solar power supply.
- **Durable** – The product is extruded polyethylene and carbon black.
- **Energy Efficient** - The roof heating system requires minimal power consumption. For even greater energy savings when heating metal roofs, use a heat retention mat.

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

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



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-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
PL-EPI-LX-TC	Thermostat with sensor	120, 208-240

Accessories

Item Code	Description
PL-T-Block	Terminal block 2-bar
PL-TBE-4	Terminal enclosure
PL-TBE-6	Terminal enclosure
MEP-C&T	Factory connections with 7’ of 12 AWG
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	Heat retention pad. (Priced per 100 square feet.)

ProLine low-voltage heating element with heat retention pad being installed on roof of commercial facility.

Roof Deicing

Shoveling and cutting down heavy, dangerous ice and icicles from the roof of a commercial facility.

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

ProLine
Radiant Heat Solutions

Pipe Trace Solutions

SELF-REGULATING HEAT TRACE CABLE

Why ProLine Heat Trace Cable?

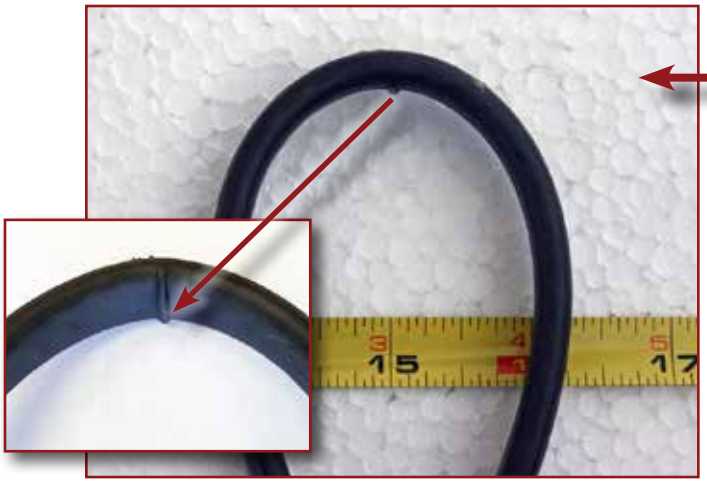
ProLine self-regulating heat cable features a more flexible outer jacket and more durable carbon core than other leading brands of self-reg cable. These features provide more consistent performance, longer lifespan, and easier installation in cold temperatures.

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 PTBO power connection kit and lighted end seal installed in industrial pipe trace application.

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

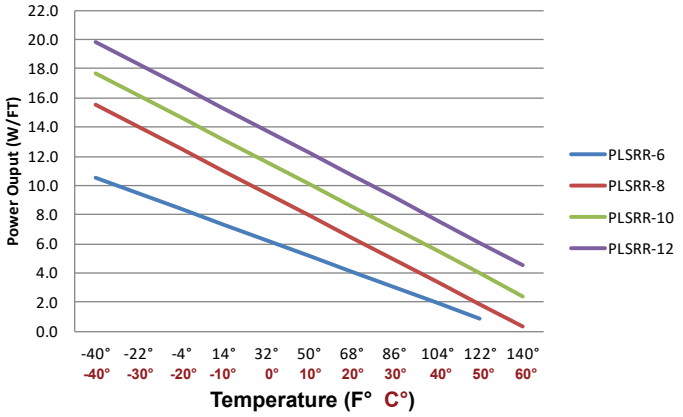
PLSRR Heat Trace Cable Data Sheet

PLSRR self-regulating heat cable is the cable of choice for standard pipe trace 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. (Features a NON-PRORATED 10-year warranty.)

Technical Data for PLSRR Heat Cable	
Service voltage	110-120 V, 208-277 V
Maximum maintain or continuous exposure temperature (power on)	+149°F (65°C)
Maximum intermittent exposure temperature 1,000 hours (power on/off)	+185°F (85°C)
Minimum installation temp.	-40°F (-40°C)
Protective braid resistance	<18.2Ω/km
Bus wire gauge	16 AWG
Approvals	cULus, CSA, hazardous, ATEX, IECEx
Warranty	10 years (Not prorated)
Certifications	Class I, Div.2 Groups A, B, C, D Class II, Div.2 Groups E, F, G Class III

Power Output Curves

Watts per Foot vs. Temperature



Maximum Length (feet) vs Circuit Breaker Size

Cable	Startup Temp.	120 V				240 V			
Breaker Size		15A	20A	30A	40A	15A	20A	30A	40A
PLSRR-6-1 and PLSRR-6-2	50°F (+10°C)	230	270	270	270	460	540	540	540
	32°F (0°C)	230	270	270	270	460	540	540	540
	14°F (-10°C)	180	210	270	270	360	420	540	540
	0°F (-18°C)	140	190	270	270	285	380	540	540
	-20°F (-29°C)	125	165	250	270	250	330	500	540
	-40°F (-40°C)	110	145	220	270	220	295	440	540
PLSRR-8-1 and PLSRR-8-2	50°F (+10°C)	150	200	210	210	300	400	420	420
	32°F (0°C)	150	200	210	210	300	400	420	420
	14°F (-10°C)	140	150	205	210	280	300	410	420
	0°F (-18°C)	100	130	200	210	200	265	400	420
	-20°F (-29°C)	85	115	175	210	175	235	350	420
	-40°F (-40°C)	80	105	155	210	155	210	315	420
PLSRR-10-1 and PLSRR-10-2	50°F (+10°C)	120	160	180	180	240	315	360	360
	32°F (0°C)	105	140	170	180	210	280	340	360
	14°F (-10°C)	95	125	165	180	190	250	330	360
	0°F (-18°C)	80	110	160	180	160	215	325	360
	-20°F (-29°C)	70	95	140	180	145	190	285	360
	-40°F (-40°C)	60	85	125	170	125	170	255	340
PLSRR-12-1 and PLSRR-12-2	50°F (+10°C)	80	140	150	150	160	270	310	310
	32°F (0°C)	75	130	145	150	150	260	290	310
	14°F (-10°C)	70	115	142	150	140	230	285	310
	0°F (-18°C)	60	80	140	150	120	160	280	310
	-20°F (-29°C)	50	65	110	150	105	140	225	310
	-40°F (-40°C)	45	60	90	140	90	125	190	280

Approvals:

Ordering Information

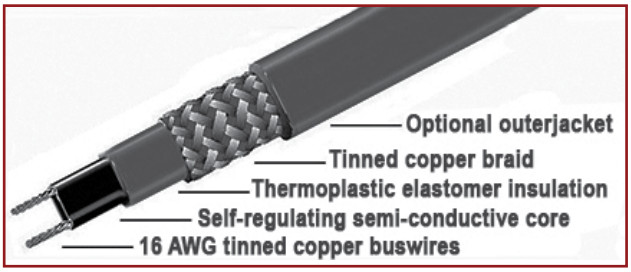
PLSRR- ☐ - ☐ - ☐ For example: PLSRR-8-2-CR

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.

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)

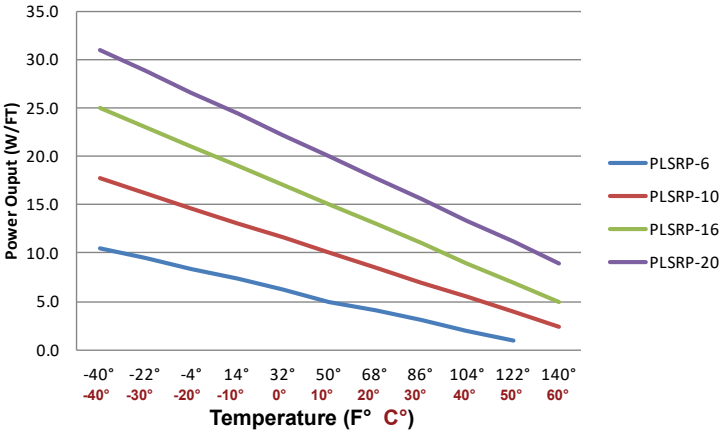
PLSRP Medium Temp Heat Trace Cable

PLSRP heat cable is an industrial grade self-regulating heat 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, 208-277 V
Maximum maintain or continuous exposure temperature (power on)	+230°F (110°C)
Maximum intermittent exposure temperature 1,000 hours (power on/off)	+275°F (135°C)
Minimum installation temperature	-40°F (-40°C)
Protective braid resistance	<18.2Ω/km
Bus wire gauge	16 AWG
Approvals	ATEX (hazardous), CE, IECEx (hazardous)
Warranty	10 years

Power Output Curves

Watts per Foot vs. Temperature



Ordering Information

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

Outer jacket
T=Fluoropolymer

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

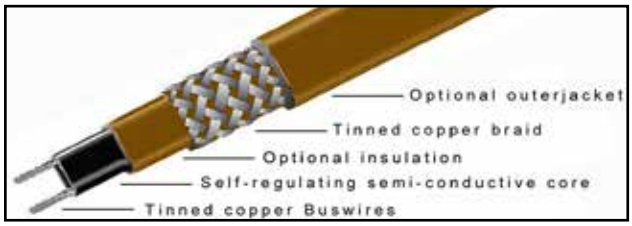
Output Power (at 40°F)

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.*

Maximum Length (feet) vs Circuit Breaker Size

Cable	Startup Temp.	120 V				240 V			
Breaker Size		15A	20A	30A	40A	15A	20A	30A	40A
PLSRP-6-1 and PLSRP-6-2	50°F (+10°C)	195	195	195	195	390	390	390	390
	32°F (0°C)	195	195	195	195	390	390	390	390
	14°F (-10°C)	195	195	195	195	370	390	390	390
	0°F (-18°C)	170	185	195	195	340	370	390	390
	-20°F (-29°C)	160	170	195	195	320	340	390	390
	-40°F (-40°C)	150	160	170	195	300	320	370	390
PLSRP-10-1 and PLSRP-10-2	50°F (+10°C)	100	130	195	195	200	265	390	390
	32°F (0°C)	95	120	185	195	190	240	370	390
	14°F (-10°C)	90	110	175	195	180	220	350	390
	0°F (-18°C)	80	105	160	195	160	210	320	390
	-20°F (-29°C)	70	95	145	195	145	195	295	390
	-40°F (-40°C)	65	90	135	180	135	180	275	365
PLSRP-16-1 and PLSRP-16-2	50°F (+10°C)	75	100	150	200	160	210	320	340
	32°F (0°C)	70	90	140	190	140	190	280	340
	14°F (-10°C)	65	85	130	170	135	175	260	340
	0°F (-18°C)	60	80	120	160	125	170	255	340
	-20°F (-29°C)	55	70	110	145	115	155	235	315
	-40°F (-40°C)	50	65	100	135	110	145	220	290
PLSRP-20-1 and PLSRP-20-2	50°F (+10°C)	60	80	120	160	120	160	240	320
	32°F (0°C)	55	75	110	150	110	150	220	300
	14°F (-10°C)	50	70	100	135	100	140	200	270
	0°F (-18°C)	45	60	95	125	95	125	190	255
	-20°F (-29°C)	40	55	85	115	85	115	175	235
	-40°F (-40°C)	40	55	80	110	80	110	165	220



Cutaway view of PLSRP self-regulating heat trace cable.

PLSRP Dimensions and Bend Radius

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

Approvals:

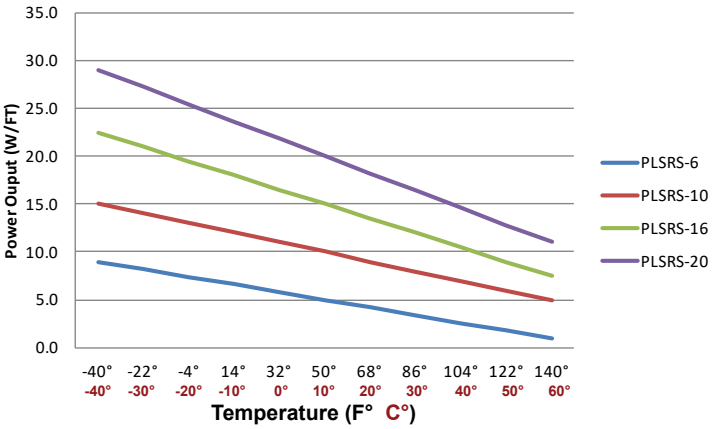
PLSRS High Temp Heat Trace Cable

PLSRS is an industrial grade self-regulating heat cable designed for high temperature 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, 208-277 V
Maximum maintain or continuous exposure temperature (power on)	+248°F (120°C)
Maximum intermittent exposure temperature 1,000 hours (power on/off)	+392°F (200°C)
Minimum installation temperature	-40°F (-40°C)
Protective braid resistance	<18.2Ω/km
Bus wire gauge	16 AWG
Approvals	ATEX (hazardous), CE, IECEx (hazardous)
Warranty	10 years

Power Output Curves

Watts per Foot vs. Temperature



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.*

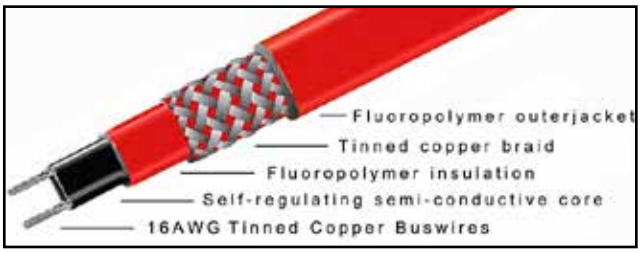
PLSRS Dimensions and Bend Radius

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

Maximum Length (feet) vs Circuit Breaker Size

Cable	Startup Temp.	120 V				240 V			
Breaker Size		15A	20A	30A	40A	15A	20A	30A	40A
PLSRS-6-1 and PLSRS-6-2	50°F (+10°C)	180	240	360	385	360	480	720	765
	32°F (0°C)	180	240	360	385	360	480	720	765
	14°F (-10°C)	170	220	340	385	340	440	680	765
	0°F (-18°C)	160	210	320	385	315	420	625	765
	-20°F (-29°C)	150	200	305	385	300	395	595	765
	-40°F (-40°C)	145	195	290	385	285	380	570	765
PLSRS-10-1 and PLSRS-10-2	50°F (+10°C)	110	145	220	270	220	295	440	540
	32°F (0°C)	110	145	220	270	220	295	440	540
	14°F (-10°C)	100	140	205	265	200	280	410	540
	0°F (-18°C)	95	130	195	260	195	260	385	540
	-20°F (-29°C)	95	125	190	250	195	250	370	540
	-40°F (-40°C)	90	120	180	240	175	240	355	540
PLSRS-16-1 and PLSRS-16-2	50°F (+10°C)	75	100	160	160	140	200	315	315
	32°F (0°C)	75	100	160	160	140	200	315	315
	14°F (-10°C)	70	100	160	160	135	200	315	315
	0°F (-18°C)	65	95	150	160	130	175	275	315
	-20°F (-29°C)	60	90	145	160	125	165	260	315
	-40°F (-40°C)	55	85	135	160	120	155	245	315
PLSRS-20-1 and PLSRS-20-2	50°F (+10°C)	55	85	130	140	115	155	245	275
	32°F (0°C)	55	85	130	140	115	155	245	275
	14°F (-10°C)	50	80	125	140	100	140	220	275
	0°F (-18°C)	50	80	120	140	100	140	215	275
	-20°F (-29°C)	45	75	115	140	90	130	205	275
	-40°F (-40°C)	45	70	110	140	90	125	190	265

ProLine's PLSRS self-regulating pipe trace cable.



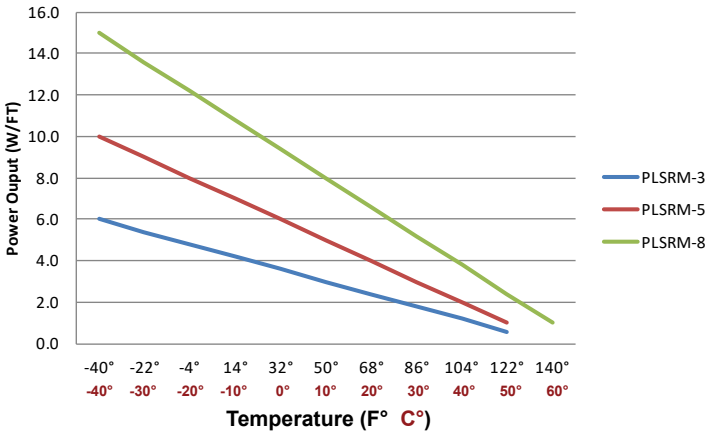
Approvals:

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.

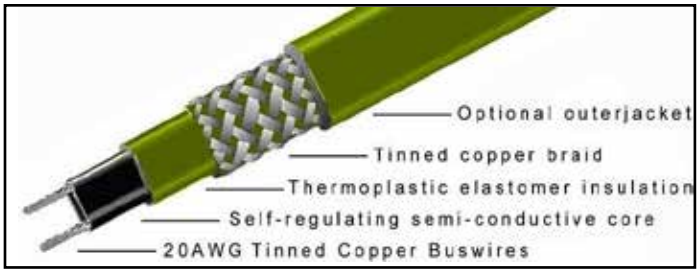
Technical Data for PLSRM Heat Cable	
Service voltage	110-120 V, 208-277 V
Maximum maintain or continuous exposure temperature (power on)	+149°F (65°C)
Maximum intermittent exposure temperature 1,000 hours (power on/off)	+185°F (85°C)
Minimum installation temperature	-40°F (-40°C)
Protective braid resistance	<18.2Ω/km
Bus wire gauge	20 AWG
Approvals	cETLus
Warranty	2 years

Watts per foot **Power Output Curves**



PLSRM Dimension and Bend Radius

Type	Dimensions	Minimum Bend Radius
PLSRM-C	6.7 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 self-regulating heat trace cable.

Maximum Length (feet) vs Circuit Breaker Size

Heat Cable	Startup Temp.	120 V					240 V		
Breaker Size		15A	20A	30A	40A	15A	20A	30A	40A
PLSRM-3-1 and PLSRM-3-2	50°F (+10°C)	160	160	160	160	320	320	320	320
	32°F (0°C)	160	160	160	160	320	320	320	320
	14°F (-10°C)	130	160	160	160	260	320	320	320
	0°F (-18°C)	120	140	160	160	240	280	320	320
	-20°F (-29°C)	107	133	160	160	214	266	320	320
	-40°F (-40°C)	93	120	160	160	186	240	320	320
PLSRM-5-1 and PLSRM-5-2	50°F (+10°C)	127	133	133	133	254	266	266	266
	32°F (0°C)	127	133	133	133	254	266	266	266
	14°F (-10°C)	105	120	133	133	210	240	266	266
	0°F (-18°C)	93	113	133	133	186	226	266	266
	-20°F (-29°C)	80	107	120	133	160	214	240	266
	-40°F (-40°C)	67	93	105	133	134	186	210	266
PLSRM-8-1 and PLSRS-8-2	50°F (+10°C)	87	113	113	113	174	226	226	226
	32°F (0°C)	87	113	113	113	174	226	226	226
	14°F (-10°C)	80	90	113	113	160	180	226	226
	0°F (-18°C)	69	80	105	113	138	160	210	226
	-20°F (-29°C)	63	73	95	113	126	146	190	226
	-40°F (-40°C)	53	67	80	113	106	134	160	226

Ordering Information

PLSRM- ☐ - ☐ - ☐ For example: PLSRM-5-2-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-5-2-CR =
5 watt, 208-277 V, Thermoplastic outer jacket

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

Pre-Assembled Heat Trace Cable

ProLine pre-assembled (pre-terminated) self-regulating heat cable is the premier solution for quick, easy installation for various 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. (Optional GFCI plus available.)

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 (For 208-277 V, please call)
Protective braid resistance	< 18.2Ω/km
Cold lead length	6 feet with plug
Electrical classification	Non-hazardous; ordinary areas
Exposure to chemicals	None
Warranty	2-years

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.

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.

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

ProLine
Radiant Heat Solutions
Self-Regulating Cable for Pipe Trace Systems

ProLine Cable Selection Guide

Heat Cable	Voltage	Application	Max. maintain temp	Max. exposure temp	Output at 40°F (watts)	Certification
Self-regulating Heat Cable						
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)
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)
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)
PLSRM	110-120 V 208-277 V	Residential water pipe heating applications	149°F (65°C)	185°F (85°C)	3,5,8	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

ProLine
Radiant Heat Solutions

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.

ProLine custom controls.

Pipe Trace Control Options

Self-regulating Heat Trace Cable

In addition to ProLine's industry leading self-regulating heat trace cable and professional system design/layout, users also have several activation device/controller options to ensure optimum performance of the pipe trace system.

WS-115 Outdoor Ambient Sensing Thermostat (WS-115) - 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-115R Outdoor Surface Sensing Thermostat (WS-115R) - 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-115 and 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 and 40°F - 110°F.
- 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.

Industrial Electronic Thermostat (WS-IET) - The IET is a microprocessor-based temperature controller designed to provide on/off control for commercial heating, cooling, air conditioning and refrigeration applications. Its comprehensive functionality makes the IET is one of the most versatile temperature controls available.

The IET features a lockable front-panel touchpad and a Liquid Crystal Display (LCD) for viewing the temperature and status of other functions. The digital display and keypad allow precise temperature settings.

When not in the programming mode, the display provides a constant readout of the sensor temperature. Annunciators on the liquid crystal display indicate when the relay is energized. The IET is also equipped with diagnostic programs that check for hardware, software or system problems and display different error codes to indicate the problem and its location.

PLSR-130/230 Intelligent Single / Dual Channel Heat Trace Controls - The PLSR-130/230 controls are single or dual point microprocessor based heat trace control thermostats. They are ideal for a variety of uses including freeze protection, hot water temperature maintenance, grease line trace, tank heating, and other temperature monitoring and control applications. Features include: Adjustable temperature setpoint allows precise control of a wide range of processes, ground fault equipment protection, precision monitoring and control, thermistor temperature sensor with 20 ft. cable included for applications of -40°F to 230°F (-40°C to 110°C), Durable weather-resistant NEMA 4X IP66 enclosure permits indoor or outdoor installation.

Pipe Trace

Cable Accessories and Connections

Item Code and Description	Components
PLSR-PTBO - Multiple entry power connection kit and junction box (hazardous locations)	Multiple entry octagon power connection kit with J-box; 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-JHE-L - Lighted end seal kit (hazardous locations)	**A** End seal stand and light assembly **B** Insulated and parallel crimps (2) **C** End seal label **D** Core sealer 
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 ⅛" 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 single end seal	**A** Black-shrinkable tube (2) (5½" long x ⅛" 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) 
PLSR03 - Fiberglass or aluminum tape	**A** Roll of tape **B** Ten (10) warning labels 

ProLine Pipe Trace Solutions

ProLine Radiant carries a variety of the industry's most trusted self-regulating heat cable to best serve the demands of industrial and commercial pipe trace applications. In addition to offering premium cable, ProLine also includes unmatched customer services, including system design/layout, installation training and technical support. ProLine is your complete, professional pipe trace solutions partner.

ProLine
Radiant Heat Solutions

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.^{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-4.4 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

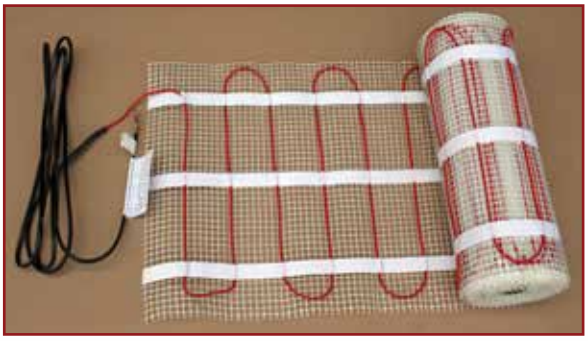
All of the ProLine floor heating systems offer you a choice of technologically advanced thermostats.

ProLine Floor Heating Ordering Information

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

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

ProLine Heat Cable in Mats



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.

ProLine Heat Cable on Spools

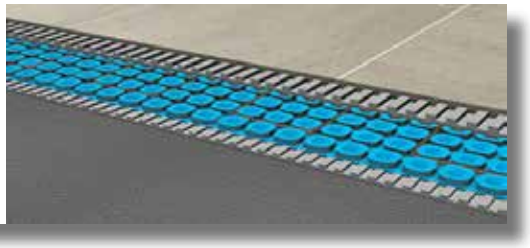
120 Volt Cable

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	10.1

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
MEMBRANE SYSTEM



Prodeso® Floor Heating Membrane System

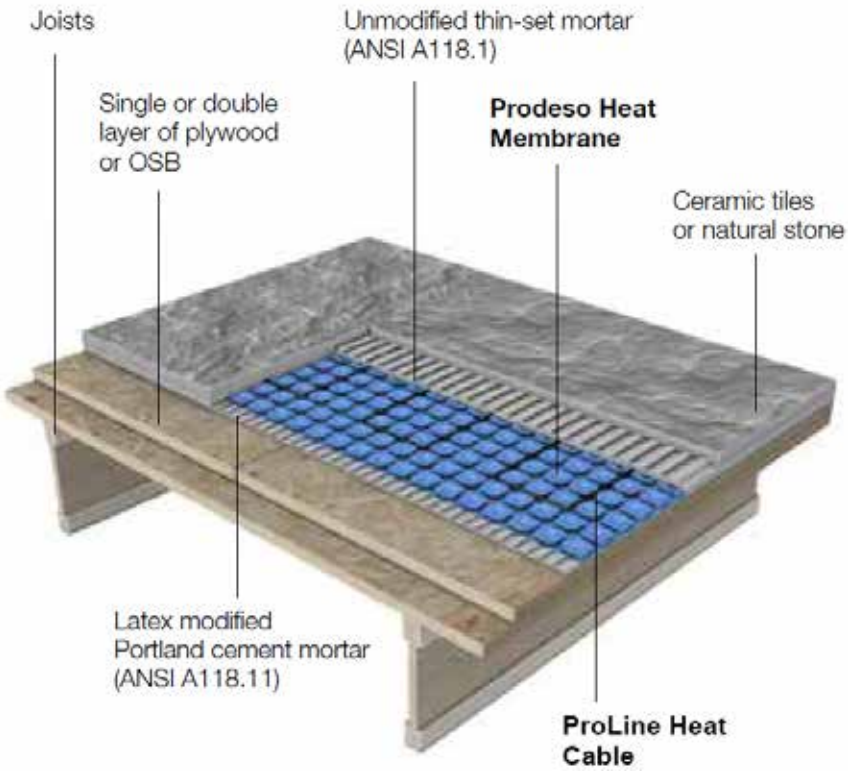
The Prodeso® membrane system is an innovative uncoupling and waterproofing system for heating floors and other surfaces without movement or expansion joints in the screed. The membrane comes in rolls and is laid out directly over the subfloor before the flooring surface is installed. The membrane features 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, heat cable and 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 1/4-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.^{2}
Thickness	⅛ inch (3 mm)
Cable spacing	2 inches (50 mm)
Cold lead	10 feet (3.0 meters)
Connections	2 conductor with ground
Inner insulation	Advanced flouropolymers

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

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
15	LM1015	9	20	180	1.5
20	LM1020	12	20	240	2.0
25	LM1025	15	20	300	2.5
30	LM1030	18	20	360	3.0
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 remesh 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

Designed to produce 15-20 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.

ProLine
Radiant Heat Solutions

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 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	Continuity alarm
TC-Strap	Plastic cable strapping, 1-foot increments
PL-Sensor	Replacement floor sensor for thermostat

ProLine Floor Heating Thermostats

Touch Screen Programmable Thermostat (PL-dual-99T) - *WiFi model available*

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
- WiFi enabled model available

PRO Dual Sensing Programmable Thermostat (PL-dual-99)

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 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

ProLine
Radiant Heat Solutions
Hydronic Radiant Heating Systems

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 (**866.676.9276**)
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

Industrial Pipe Tracing Solutions

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.

1461 East 840 North
Orem, UT 84097 USA
Phone: 801.948.7600
Fax: 801.948.7599
Toll free: 866.676.9276