

**DELTA-THERM**  
CORPORATION®

By:  
**INNOVAIR**  
SOLUTIONS



2023 PRODUCT CATALOG



# Table of Contents

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## Floor Warming

	<b>FHM</b> Floor Heating Cable on Mat	4
	<b>DTR</b> Floor Heating Cable for Membrane	6
	<b>DWF-R</b> Floor Heating Cable for Installation with Strapping	8
	<b>DWC-M</b> Heating Cable for Concrete on Mat	10
	<b>DWC-R</b> Heating Cable for Concrete in Reel	12

## Snow Melting

	<b>DWS-T</b> Heating Cable for Snow Melting on Mat	14
	<b>TXLP1</b> Single Conductor Series Resistance Custom Cable Assembly for Snow Melting and De-icing Applications	16

## Residential and Light Commercial Plug-in Cable

	<b>ORF-P</b> 120V Preassembled Series Resistance Heating Cable for Pipes	18
	<b>ORF-R</b> 120V Preassembled Series Resistance Heating Cable for Roof and Gutter De-icing	20

## Self-Regulating

### Thrifty Trace

	<b>SR-MA</b> Micro Self-Regulating Heating Cable SR-MA	22
--	---	----

### Potable Water

	<b>SR-MA-BF</b> Micro Self-Regulating Heating Cable SR-MA-BF Suitable for use in potable water	24
--	---	----

### Preassembled

	<b>SR-PI</b> 120V Preassembled Self-Regulating Heating Cable for Pipe Tracing for Freeze Protection and Roof and Gutter De-icing	26
--	---	----

### Commercial

	<b>SR-NA</b> All Purpose Self-Regulating Heating Cable SR-NA	28
--	---	----

### Institutional / Industrial

	<b>PSB</b> All Purpose Self-Regulating Heating Cable PSB	30
--	---	----

	<b>MSB</b> Medium Temperature Self-Regulating Heating Cable MSB	32
--	--	----

	<b>HSB</b> High Temperature Self-Regulating Heating Cable HSB	34
--	--	----



## Table of Contents

### Constant Wattage

	<b>PF</b> High Temperature Constant Wattage Heating Cable PF	<b>36</b>
	<b>PT</b> Ultra High Temperature Constant Wattage Heating Cable PT	<b>38</b>
	<b>BPL</b> High Temperature Constant Wattage Heating Cable BPL	<b>40</b>

### Series Resistance

	<b>ELKM-AG-NA</b> Fluoropolymer Insulated Series Resistance Heating Cable	<b>42</b>
	<b>MI</b> Mineral Insulated (M.I.) Cable Assembly One and Two Conductor	<b>44</b>

### Accessories

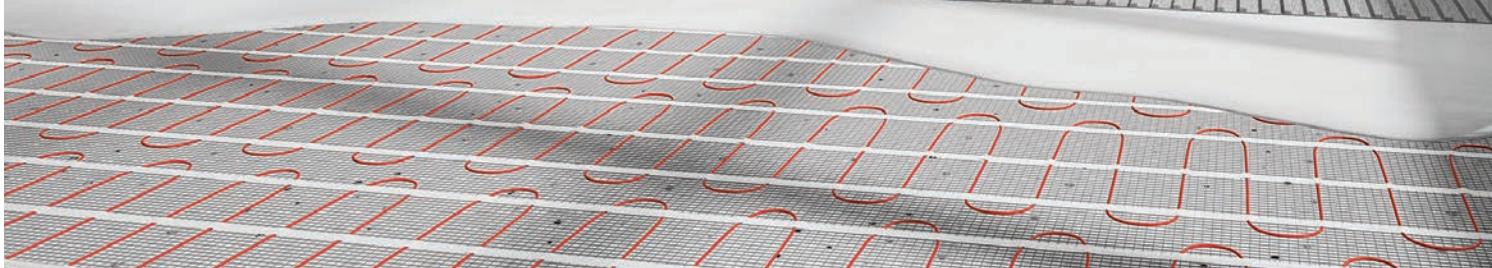
SR-MA Cables	<b>48</b>
SR-MA-BF Cables	<b>49</b>
SR-NA Cables	<b>50</b>
PSB Cables	<b>52</b>
BPL Cables	<b>53</b>
PSB / MSB / HSB Cables	<b>54</b>
PT / PF Cables	<b>57</b>
Roof / Gutter Cables	<b>59</b>
Pipe Tracing Cables	<b>60</b>

### Controls

Floor Warming	<b>61</b>
Snow Melting and Roof De-icing	<b>62</b>
Heat Tracing	<b>67</b>

*Prices, specifications and warranties may change without prior notice.*

# FHM



## Floor Heating Cable on Mat

### Features

#### Voltage

120V, 240/208V, 1-phase.

#### Cold lead length

10' (3 m).

#### Construction

Heating cable made of a twin conductor fastened to an adhesive fibreglass mat for a simpler and faster installation with negligible magnetic field.

#### Watt density

12W/sq. ft. (130W/sq. m), 3" (76 mm) spacing.

#### Dimension

Mats of 18 in. (0.46 m) in width offered in several lengths.

#### Control

Two types of control method possible (see instruction manual for details):

Surface heating control with electronic thermostat in floor mode (F) and temperature sensor.

Ambient heating control with electronic thermostat in ambient mode with floor limit (A or AF) and temperature sensor.

Note: A ground fault circuit interrupter (GFCI) must be used with this heating device unless exempted by the applicable national and/or local electrical code for the area of installation.

#### Included materials

15' (4.6 m) floor sensor.

Measurements table label (to be placed in electrical panel).

#### Installation

Never cut or shorten the heating cable.

For indoor applications only.

On concrete slab or plywood subfloor.

#### Warranty

25-year warranty on the heating cable.

#### Application

Kitchen, bathroom, entrance way, family room, living room.





FHM

Floor Heating Cable on Mat



c UL US

## Models

Watts	Product #		Cable diameter (mm)	Covered surface <sup>1</sup>		Length		Weight	
	240/208V	120V		sq. ft.	sq. m	ft. in.	m	lb	kg
60	-	FHM120-60	3.2	5	0.5	3' 4"	0.9	2.0	0.9
120	FHM240-120	FHM120-120	3.2	10	0.9	6' 8"	1.8	2.0	0.9
180	-	FHM120-180	3.2	15	1.4	10'	3.0	3.0	1.4
240	FHM240-240	FHM120-240	3.2	20	1.9	13' 4"	4	3.0	1.4
300	-	FHM120-300	3.2	25	2.4	16' 8"	4.9	4.0	1.8
360	FHM240-360	FHM120-360	3.2	30	2.8	20'	6.1	4.0	1.8
420	-	FHM120-420	3.2	35	3.3	23' 4"	7	5.0	2.3
480	FHM240-480	FHM120-480	3.2	40	3.8	26' 8"	7.9	5.0	2.3
540	-	FHM120-540	3.2	45	4.2	30'	9.2	6.0	2.7
600	FHM240-600	FHM120-600	3.2	50	4.7	33' 4"	10.1	7.0	3.2
720	FHM240-720	FHM120-720	3.2	60	5.6	40'	12.2	7.0	3.2
840	FHM240-840	FHM120-840	3.2	70	6.5	46' 8"	14.0	9.0	4.1
960	FHM240-960	FHM120-960	3.2	80	7.4	53' 4"	16.2	10.0	4.5
1080	FHM240-1080	-	3.2	90	8.4	60'	18.3	11.0	5.0
1200	FHM240-1200	-	3.2	100	9.3	66' 8"	20.1	11.0	5.0
1440	FHM240-1440	-	3.2	120	11.2	80'	24.4	13.0	5.9

<sup>1</sup> Does not represent the surface of the room but rather the surface covered by the floor heating system, excluding the fixtures and other spaces to consider.

208V = 75% of wattage at 240V.

15' (4.6 m) floor sensor and 10' (3 m) cold lead included.

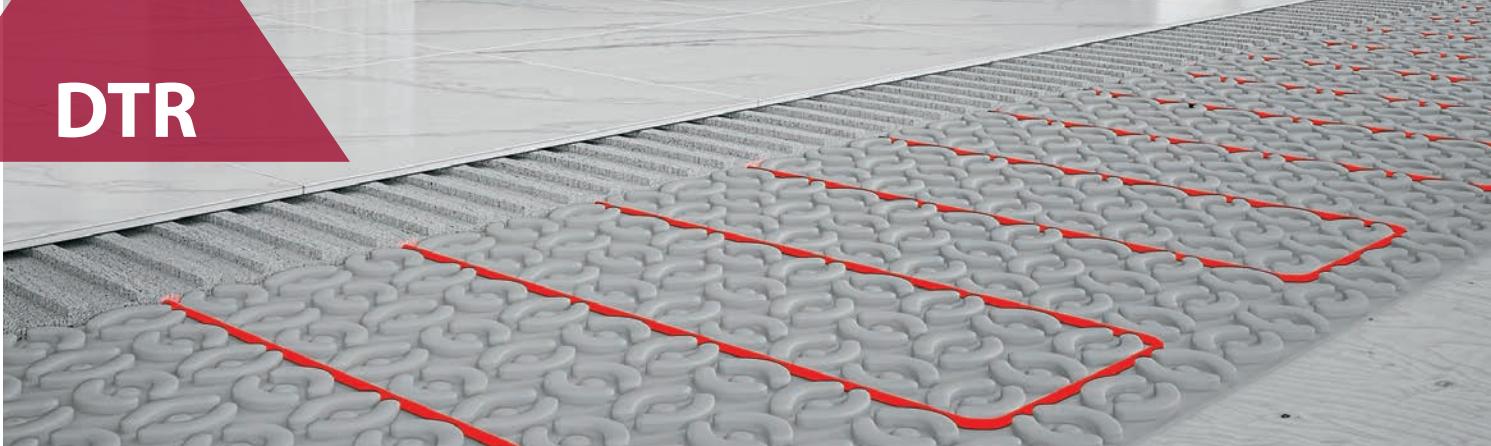
The color of the mesh may be different.

## Options

Product #	Description
<b>Kit</b>	
OTM-CC	CableCheck - Electrical fault indicator
OTM-SA	Adhesive spray to secure the mat on concrete slab, 16.75 oz (474 g)
KIT-SP1	Repair kit
KIT-CBL-SN	15 ft. (4.6 m) floor sensor



# DTR



## Floor Heating Cable for Membrane

### Features

#### Voltage

- 120V, 240/208V, 1-phase.

#### Cold lead length

- 10' (3 m).

#### Construction

- Heating cable made of a twin conductor for a simpler and faster installation, compatible with uncoupling membrane systems.

#### Watt density

- 9W/sq. ft. (97W/sq. m), 4" (102 mm) spacing.
- 10W/sq. ft. (108W/sq. m), 3 5/8" (92 mm) spacing.

#### Control

- Two types of control method possible (see instruction manual for details):
  - Surface heating control with electronic thermostat in floor mode (F) and temperature sensor.
  - Ambient heating control with electronic thermostat in ambient mode with floor limit (A or AF) and temperature sensor.

*Note: A ground fault circuit interrupter (GFCI) must be used with this heating device unless exempted by the applicable national and/or local electrical code for the area of installation.*

#### Included materials

- 15' (4.6 m) floor sensor.
- Measurements table label (to be placed in electrical panel).

#### Installation

- Never cut or shorten the heating cable.
- For indoor applications only.
- On concrete slab or plywood subfloor.
- On uncoupling membrane sold in option.
- For heating cable installation on uncoupling membrane systems, consult the membrane manufacturer's instructions to ensure that it is compatible with the use of heating cables.

#### Warranty

- 25-year warranty on the heating cable.

#### Application

- Kitchen, bathroom, entrance way, family room, living room.





DTR

Floor Heating Cable for Membrane



c UL US

## Models

Watts	Product # 240/208V	Product # 120V	Cable diameter (mm)	Covered surface depending on spacing <sup>1</sup>				Length		Weight	
				3 1/2" (88 mm) <sup>2</sup>	10W/sq. ft.	108W/sq. m	9.6W/sq. ft.	103W/sq. m	ft.	m	lb
85	-	DTR0082	4.3	9.5	0.9	10.0	0.9	32	9.75	2.6	0.9
120	-	DTR0122	4.3	12.0	1.1	12.5	1.2	40	12.19	2.6	0.9
150	-	DTR0152	4.3	16.0	1.5	16.5	1.5	53	16.15	3.1	1.4
170	DTR0170	DTR0172	4.3	18.5	1.7	19.0	1.8	61	18.59	3.1	1.4
240	DTR0240	DTR0242	4.3	24.0	2.2	25.0	2.3	80	24.38	3.8	1.6
300	DTR0300	DTR0302	4.3	30.5	2.8	31.5	2.9	101	30.78	4	1.8
360	DTR0360	DTR0362	4.3	36.5	3.4	37.5	3.5	120	36.58	4.2	1.9
420	DTR0420	DTR0422	4.3	42.5	4.0	44.0	4.1	141	42.98	4.9	2.2
475	DTR0475	DTR0472	4.3	48.5	4.5	50.0	4.6	160	48.77	6	2.7
600	DTR0600	DTR0602	4.3	60.5	5.6	62.5	5.8	200	60.96	6.9	3.1
720	DTR0720	DTR0722	4.3	72.5	6.7	75.0	7.0	240	73.15	7.9	3.6
840	DTR0840	DTR0842	4.3	84.5	7.9	87.5	8.1	280	85.34	8.7	4
960	DTR0960	DTR0962	4.3	96.5	9.0	100.0	9.3	320	97.54	9.3	4.2
1080	DTR1080	-	4.3	109.0	10.1	112.5	10.5	360	109.73	10	4.6
1140	-	DTR1142	4.3	115	10.66	119	11.03	380	115.82	11.6	5.2
1200	DTR1200	-	4.3	121.0	11.2	125.0	11.6	400	121.92	11	5
1320	-	DTR1322	4.3	133	12.35	137.5	12.77	440	134.11	13.7	6.2
1440	DTR1440	-	4.3	145.0	13.5	150.0	13.9	480	146.30	13	5.9
1450	-	DTR1452	4.3	145	13.5	150	13.9	480	146.30	16	7.2
1500	-	DTR1502	4.3	151	14	156.5	14.5	500	152.40	17.4	7.9
1600	DTR1600	-	4.3	169.0	15.7	175.0	16.3	560	170.69	15	6.8
1680	-	DTR1682	4.3	169.5	15.7	175	16.3	560	170.69	20.3	9.1
1920	DTR1920	-	4.3	193.5	18.0	200.0	18.6	640	195.07	18	8.2
2280	DTR2280	-	4.3	229.5	21.3	237.5	22.1	760	231.65	22	10
2640	DTR2640	-	4.3	266.0	24.7	275.0	25.5	880	268.22	26	11.8
2900	DTR2900	-	4.3	292.5	27.2	302.5	28.1	968	295.04	30	13.6
3000	DTR3000	-	4.3	302.0	28.1	312.5	29.0	1000	304.80	31	14
3360	DTR3360	-	4.3	338.5	31.4	350	32.5	1120	341.38	36.9	16.8

<sup>1</sup> Does not represent the surface of the room but rather the surface covered by the floor heating system, excluding fixtures and other spaces to consider.

<sup>2</sup> Spacing with the NADCM membrane when the cable is installed with 3 spacing castellations.

208V = 75% of wattage at 240V.

15' (4.6 m) floor sensor and 10' (3 m) cold lead included.

## Options

Product # Kit	Description
NADCM-M-80	Fleeceback uncoupling membrane in sheet, 2' 6-5/16" X 3' 3", 8.16 sq. ft., sold in box of 10 sheets
NADCM-M-150	Fleeceback uncoupling membrane in roll, 46' 9" x 3' 3", 150 sq. ft.
NADCM-S-80	Self-adhesive uncoupling membrane in sheet, 2' 6-5/16" X 3' 3", 8.16 sq. ft., sold in box of 10 sheets
NADCM-S-150	Self-adhesive uncoupling membrane in roll, 46' 9" x 3' 3", 150 sq. ft.
OTM-CC	CableCheck - Electrical fault indicator
OTM-SA	Adhesive spray to secure the mat on concrete slab, 16.75 oz (474 g)
KIT-SP1	Repair kit
KIT-CBL-SN	15 ft. (4.6 m) floor sensor



## Floor Heating Cable for Installation with Strapping

### Features

#### Voltage

- 120V, 240/208V, 1-phase.

#### Cold lead length

- 10' (3 m).

#### Construction

- Heating cable made of a twin conductor for a simpler and faster installation, compatible with uncoupling membrane systems.

#### Watt density

- 12W/sq. ft. (130W/sq. m), 3" (76 mm) spacing.
- 9W/sq. ft. (100W/sq. m), 4" (102 mm) spacing

#### Control

- Two types of control method possible (see instruction manual for details):
  - Surface heating control with electronic thermostat in floor mode (F) and temperature sensor.
  - Ambient heating control with electronic thermostat in ambient mode with floor limit (A or AF) and temperature sensor.

*Note: A ground fault circuit interrupter (GFCI) must be used with this heating device unless exempted by the applicable national and/or local electrical code for the area of installation.*

#### Included materials

- Plastic strapping.
- 15' (4.6 m) floor sensor.

#### Installation

- Never cut or shorten the heating cable.
- For indoor applications only.
- On concrete slab or plywood subfloor.

#### Warranty

- 25-year warranty on the heating cable.

#### Application

- Kitchen, bathroom, entrance way, family room, living room.





DWF-R

Floor Heating Cable for Installation with Strapping



c UL US

## Models

Watts	Product # 240/208V	Strapping included <sup>1</sup>		Cable diameter (mm)	Covered surface depending on spacing <sup>2</sup>				Length ft.	Length m	Strapping length included (ft.)
		Product # 120V	120V		Spacing 3" (76 mm) 12W/sq. ft.	130W/sq. m	Spacing 4" (102 mm) 9W/sq. ft.	100W/sq. m			
85	-	DWF-R0082		4.3	8	0.7	11	1.0	32	9.75	25
120	-	DWF-R0122		4.3	10	0.9	13	1.2	40	12.19	25
150	-	DWF-R0152		4.3	13	1.2	17	1.6	53	16.15	25
170	DWF-R0170	DWF-R0172		4.3	15	1.4	20	1.9	61	18.59	25
240	DWF-R0240	DWF-R0242		4.3	20	1.9	27	2.5	80	24.38	25
300	DWF-R0300	DWF-R0302		4.3	25	2.3	33	3.1	101	30.78	25
360	DWF-R0360	DWF-R0362		4.3	30	2.8	40	3.7	120	36.58	50
420	DWF-R0420	DWF-R0422		4.3	35	3.3	47	4.3	141	42.98	50
475	DWF-R0475	DWF-R0472		4.3	40	3.7	53	5.0	160	48.76	50
600	DWF-R0600	DWF-R0602		4.3	50	4.6	67	6.2	200	60.96	50
720	DWF-R0720	DWF-R0722		4.3	60	5.6	80	7.4	240	73.15	75
840	DWF-R0840	DWF-R0842		4.3	70	6.5	93	8.7	280	85.34	75
960	DWF-R0960	DWF-R0962		4.3	80	7.4	107	9.9	320	97.54	75
1080	DWF-R1080	-		4.3	90	8.4	120	11.2	360	109.73	100
1140	-	DWF-R1142		4.3	95	8.8	127	11.7	380	115.82	100
1200	DWF-R1200	-		4.3	100	9.3	133	12.4	400	121.92	100
1320	-	DWF-R1322		4.3	110	10.2	147	13.6	440	134.11	100
1440	DWF-R1440	-		4.3	120	11.1	160	14.9	480	146.30	100
1450	-	DWF-R1452		4.3	120	11.1	160	14.8	480	146.30	100
1500	-	DWF-R1502		4.3	125	11.6	167	15.5	500	152.40	125
1600	DWF-R1600	-		4.3	140	13.0	187	17.4	560	170.69	125
1680	-	DWF-R1682		4.3	140	13.0	187	17.4	560	170.69	125
1920	DWF-R1920	-		4.3	160	14.9	213	19.8	640	195.07	125
2280	DWF-R2280	-		4.3	190	17.7	253	23.6	760	231.64	150
2640	DWF-R2640	-		4.3	220	20.4	293	27.2	880	268.22	200
2900	DWF-R2900	-		4.3	242	22.5	323	30.0	968	295.04	200
3000	DWF-R3000	-		4.3	250	23.2	333	30.9	1000	304.80	200
3360	DWF-R3360	-		4.3	280	26.0	374	34.7	1120	341.38	200

<sup>1</sup> Strapping included. The length of plastic strapping included is based on a square room with strapping every 24" (610 mm).

<sup>2</sup> Does not represent the surface of the room but rather the surface covered by the floor heating system, excluding fixtures and other spaces to consider.

15' (4.6 m) floor sensor and 10' (3 m) cold lead included.

## Options

Product # Kit	Description
OTM-CC	CableCheck - Electrical fault indicator
KIT-SP1	Repair kit
KIT-CBL-G25	25 ft. (7.6 m) plastic strapping
KIT-CBL-SN	15 ft. (4.6 m) floor sensor

# DWC-M



## Heating Cable for Concrete on Mat

### Features

#### Voltage

- 240/208V 1-phase.

#### Construction

- Twin conductor heating cable attached to a plastic mat with negligible magnetic field.

#### Watt density

- 11W/sq. ft. (120W/sq. m), factory installed on mat at 6" (15 cm) spacing.

#### Dimension

- 24" (0.6 m) wide mat available in several lengths.

#### Cold lead length

- 8' 2" (2.5 m) cold lead included.
- Optional 50' (15 m) cold lead available upon request.

#### Control

- Two types of control method possible (see instruction manual for details):
  - Surface heating control with electronic thermostat in floor mode (F) and temperature sensor.
  - Ambient heating control with electronic thermostat in ambient mode with floor limit (A or AF) and temperature sensor.

*Note: A ground fault circuit interrupter (GFCI) must be used with this heating device unless exempted by the applicable national and/or local electrical code for the area of installation.*

#### Included materials

- 15' (4.6 m) temperature sensor.
- Plastic floor fasteners (KIT-WC-CLP).
- Measurement table label (to be placed in for electrical panel).

#### Installation

- Never cut or shorten the heating cable.
- For indoor applications only, residential or commercial.
- Installs under a 4" to 6" (10 cm to 15 cm) concrete slab or under a 1.5" to 4" concrete topping (4 cm to 10 cm).  
*Note: It's highly recommended to insulate the concrete slab in order to avoid heat loss from below (see instruction manual for all installation details).*
- Compatible with most floor coverings (check with the dealer or manufacturer).
- Installation with or without metallic structure for reinforced concrete.

#### Warranty

- 20-year warranty on the heating cable.

#### Application

- Basement, garage, bathroom, kitchen, family room, workshop, pool, shower, entrance way, hospital, hotel, factory, business, restaurant, sunroom, greenhouse, buildings used for housing animals.





DWC-M

Heating Cable for Concrete on Mat

CSA  
C  
US

## Models

Watts	Product # 240/208V	Covered surface <sup>1</sup>		Length		Weight	
		sq. ft.	sq. m	ft. in.	m	lb	kg
150	DWC-M0150	14.0	1.3	6' 5"	1.9	3.0	1.4
200	DWC-M0200	19.0	1.7	8' 4"	2.5	3.7	1.7
300	DWC-M0300	28.0	2.6	12' 6"	3.8	4.0	1.8
400	DWC-M0400	38.0	3.5	16' 8"	5.1	4.5	2.0
500	DWC-M0500	46.5	4.3	20' 10"	6.4	5.0	2.3
600	DWC-M0600	56.0	5.2	25'	7.6	6.0	2.7
700	DWC-M0700	65.5	6.1	29' 2"	8.9	7.0	3.1
850	DWC-M0850	80.0	7.4	35' 5"	10.8	8.0	3.6
950	DWC-M0950	89.0	8.3	39' 7"	12.1	9.0	4.0
1100	DWC-M1100	103.0	9.6	45' 10"	14.0	10.0	4.5
1200	DWC-M1200	113.0	10.5	50'	15.2	11.0	5.0
1300	DWC-M1300	121.5	11.3	54' 2"	16.5	12.0	5.4
1400	DWC-M1400	130.5	12.1	58' 4"	17.8	13.0	6.0
1500	DWC-M1500	140.5	13.1	62' 6"	19.1	14.0	6.4
1600	DWC-M1600	149.5	13.9	66' 8"	20.3	15.0	6.8
1700	DWC-M1700	159.0	14.8	70' 10"	21.6	16.0	7.2
1850	DWC-M1850	172.5	16.0	77' 1"	23.5	17.0	7.8
2000	DWC-M2000	187.5	17.4	83' 4"	25.4	18.0	8.1
2200	DWC-M2200	206.0	19.1	91' 6"	27.9	21.0	9.5
2400	DWC-M2400	225.0	20.9	100'	30.5	23.0	10.4
2550	DWC-M2550	239.0	22.2	106' 6"	32.5	25.0	11.3
2700	DWC-M2700	253.0	23.5	112' 6"	34.3	28.0	12.7
2850	DWC-M2850	267.0	24.8	119'	36.3	30.0	13.6
3000	DWC-M3000	281.0	26.1	125'	38.1	32.0	14.5
3200	DWC-M3200	300.0	27.9	133' 6"	40.7	34.0	15.4
3400	DWC-M3400	318.5	29.6	141' 8"	43.2	36.0	16.3
3600	DWC-M3600	336.0	31.2	150'	45.7	38.0	17.2

<sup>1</sup> Does not represent the room surface but rather the area covered by the cable mat including 3" (7.5 cm) spacing between the mat strips but excluding fixed elements to be bypassed and any other required clearances.

208V = 75% of wattage at 240V.

## Options

Product # Kit	Product # Factory installed*	Description
OTM-CC <sup>1</sup>	-	CableCheck – Electrical indicator
KIT-WC-CLP	-	Bag of 50 plastic floor fasteners for heating cable on mat
KIT-SP2	-	Repair kit
KIT-CBL-SN	-	15 ft. (4.6 m) floor sensor
-	50 <sup>2</sup>	Optional 50'(15 m) cold lead

\* For factory installed options, add the option number to the product number.

<sup>1</sup> With any DWC order, the accessory OTM-CC can be added free of charge upon customer request.

<sup>2</sup> Made to order only. Allow additional 9 to 12 weeks lead time.

# DWC-R



## Heating Cable for Concrete in Reel

### Features

#### Voltage

- 240/208V 1-phase.

#### Construction

- Twin conductor heating cable with negligible magnetic field.

#### Watt density

- 11W/sq. ft. (120W/sq. m), recommended installation - 6" (15 cm) spacing.

#### Cold lead length

- 8' 2" (2.5 m) cold lead included.
- Optional 50' (15 m) cold lead available upon request.

#### Control

- Two types of control method possible (see instruction manual for details):
  - Surface heating control with electronic thermostat in floor mode (F) and temperature sensor.
  - Ambient heating control with electronic thermostat in ambient mode with floor limit (A or AF) and temperature sensor.

*Note: A ground fault circuit interrupter (GFCI) must be used with this heating device unless exempted by the applicable national and/or local electrical code for the area of installation.*

#### Included materials

- 15' (4.6 m) temperature sensor.
- Plastic tie-wraps.
- Measurement table label (to be placed in for electrical panel).

#### Installation

- Never cut or shorten the heating cable.
  - For indoor applications only, residential or commercial.
  - Installs under a 4" to 6" (10 cm to 15 cm) concrete slab or under a 1 1/2" to 4" concrete topping (4 cm to 10 cm).
- Note: It's highly recommended to insulate the concrete slab in order to avoid heat loss from below (see instruction manual for all installation details).*
- Requires a metallic structure or wire mesh for reinforced concrete with spacing of 6" (15 cm) for the installation.
  - Compatible with most floor coverings (check with the dealer or manufacturer).

#### Warranty

- 20-year warranty on the heating cable.

#### Application

- Basement, garage, bathroom, kitchen, family room, workshop, pool, shower, entrance way, hospital, hotel, factory, business, restaurant, sunroom, greenhouse, buildings used for housing animals.





DWC-R

Heating Cable for Concrete in Reel

CSA  
C  
US

## Models

Watts	Product # 240/208V	Covered surface <sup>1</sup> Spacing 6" (15 cm)		Cable length			Weight	
		sq. ft.	sq. m	ft.	m	lb	kg	
300	DWC-R0300	28.0	2.6	56	17.07	4.0	1.8	
500	DWC-R0500	46.5	4.3	93	28.35	5.0	2.3	
700	DWC-R0700	62.5	5.8	125	38.10	7.0	3.1	
950	DWC-R0950	88.0	8.2	176	53.64	9.0	4.0	
1300	DWC-R1300	125.0	11.6	250	76.20	12.0	5.4	
1700	DWC-R1700	156.0	14.5	312	95.10	16.0	7.2	
2000	DWC-R2000	187.0	17.4	374	114.00	18.0	8.1	
2400	DWC-R2400	218.5	20.3	437	133.20	23.0	10.4	
3000	DWC-R3000	279.5	26.0	559	170.38	32.0	14.5	
3400	DWC-R3400	312.5	29.03	625	190.50	36.0	16.3	
3700	DWC-R3700 <sup>2</sup>	341.0	31.7	682	207.87	39.0	17.7	
4000	DWC-R4000 <sup>2</sup>	372.5	34.6	745	227.08	42.0	19.0	

<sup>1</sup> Does not represent the room surface but rather the area covered by the cable while leaving a 6" (15 cm) spacing between cables and excluding fixed elements to be bypassed and any other clearance required.<sup>2</sup> Not compatible with a floor heating thermostat rated for 15A and less. Requires relay with low voltage thermostat.

208V = 75% of wattage at 240V.

## Options

Product # Kit	Product # Factory installed*	Description
OTM-CC <sup>1</sup>	-	CableCheck – Electrical indicator
KIT-SP2	-	Repair kit
KIT-CBL-SN	-	15 ft. (4.6 m) floor sensor
-	50 <sup>2</sup>	Optional 50'(15 m) cold lead

\*For factory installed options, add the option number to the product number.

<sup>1</sup> With any DWC order, the accessory OTM-CC can be added free of charge upon customer request.<sup>2</sup> Made to order only. Allow additional 9 to 12 weeks lead time.



## Heating Cable for Snow Melting on Mat

### Features

#### Voltage

- 208V and 240V, 1-phase.

#### Construction

- Series heating cable set, twin conductor type.
- Heating cable held as a mat at regular 3" (76 mm) spacing with flexible strips.
- Fluoropolymer/XLPE resistance wire insulation 0.019" (0.5 mm) thick.
- Copper shielding (0.823 sq. mm) serves as ground.
- Polyolefin (EPR) outer sheath insulation 0.08" (2 mm) thick.



#### Watt density

- 50W/sq. ft. (538W/sq. m) at 208V and 240V, 3" (76 mm) spacing.

#### Dimension

- 24" (610 mm) and 36" (914 mm) wide mats offered in several lengths.



#### Cold lead

- 50' (15 m) long.
- Optional 100' (30 m) cold lead available upon request.
- 12 AWG or 14 AWG (according to maximum allowable load).
- PVC outer sheath insulation 0.03" (0.76 mm) thick.
- 3/8" (9.5 mm) outer diameter.

#### Included materials

- Measurements table label (to be placed in electrical panel).

#### Installation

- Never cut or shorten the heating cable.
- For outdoor applications only.
- The heating cable must be completely embedded in concrete, asphalt or stone dust under paving.
- Minimum installation temperature -5 °C (23 °F).
- Maximum long-term exposure temperature 105 °C (221 °F).
- Maximum exposure temperature for 10 minutes 220 °C (428 °F).



#### Warranty

- 10-year warranty on heating cable.

#### Application

- Residential driveway, sidewalk, access ramp, underground parking ramp, boarding platforms for animals.



DWS-T

Heating Cable for Snow Melting on Mat



## 24 in. (610 mm) Wide Models

Watts	Product # 208V	Product # 240V	Amp.	Covered surface <sup>1</sup> sq. ft.      sq. m	Mat length ft.      m	Cable length <sup>2</sup> ft.      m	Weight lb      kg
500	DWS-T0508-24	DWS-T0500-24	2.08	11.0      1.0	5      1.5	43      13.1	3.0      1.4
1000	DWS-T1008-24	DWS-T1000-24	4.17	22.0      2.0	10      3.0	86      26.2	5.0      2.3
1500	DWS-T1508-24	DWS-T1500-24	6.25	32.5      3.0	15      4.6	128      39.0	7.0      3.2
2000	DWS-T2008-24	DWS-T2000-24	8.33	43.5      4.0	20      6.1	171      52.1	10.0      4.5
2500	DWS-T2508-24	DWS-T2500-24	10.42	54.0      5.0	25      7.6	214      65.2	12.5      5.7
3000	DWS-T3008-24	DWS-T3000-24	12.50	65.0      6.0	30      9.1	257      78.4	15.0      6.8
4000	DWS-T4008-24	DWS-T4000-24	16.67	86.5      8.1	40      12.2	342      104.3	20.0      9.1
5000	DWS-T5008-24	DWS-T5000-24	20.83	108.5      10.1	50      15.2	428      130.5	25.0      11.4
6000	-	DWS-T6000-24	25.00	130.0      12.1	60      18.3	513      156.4	30.0      13.6

## 36 in. (914 mm) Wide Models

Watts	Product # 208V	Product # 240V	Amp.	Covered surface <sup>1</sup> sq. ft.      sq. m	Mat length ft.      m	Cable length <sup>2</sup> ft.      m	Weight lb      kg
450	DWS-T0458-36	DWS-T0450-36	1.88	9.5      0.9	3      0.9	38      11.6	2.5      1.1
750	DWS-T0758-36	DWS-T0750-36	3.13	16.0      1.5	5      1.5	63      19.2	3.5      1.6
1050	DWS-T1058-36	DWS-T1050-36	4.38	22.0      2.0	7      2.1	88      26.8	5.0      2.3
1500	DWS-T1508-36	DWS-T1500-36	6.25	31.5      2.9	10      3.0	126      38.4	8.0      3.6
3000	DWS-T3008-36	DWS-T3000-36	12.50	63.5      5.9	20      6.1	251      76.5	15.0      6.8
4500	DWS-T4508-36	DWS-T4500-36	18.75	95.0      8.8	30      9.1	377      114.9	22.5      10.2
6000	-	DWS-T6000-36	25.00	126.5      11.8	40      12.2	502      153.0	30.0      13.6

<sup>1</sup> Represents the area covered by the mat including 3" (76 mm) spacing between the mat strips but excluding fixed elements to be bypassed and any other required clearances.

<sup>2</sup> Represents the total length of the heating cable if it is detached from the flexible strips.

## Installation Options

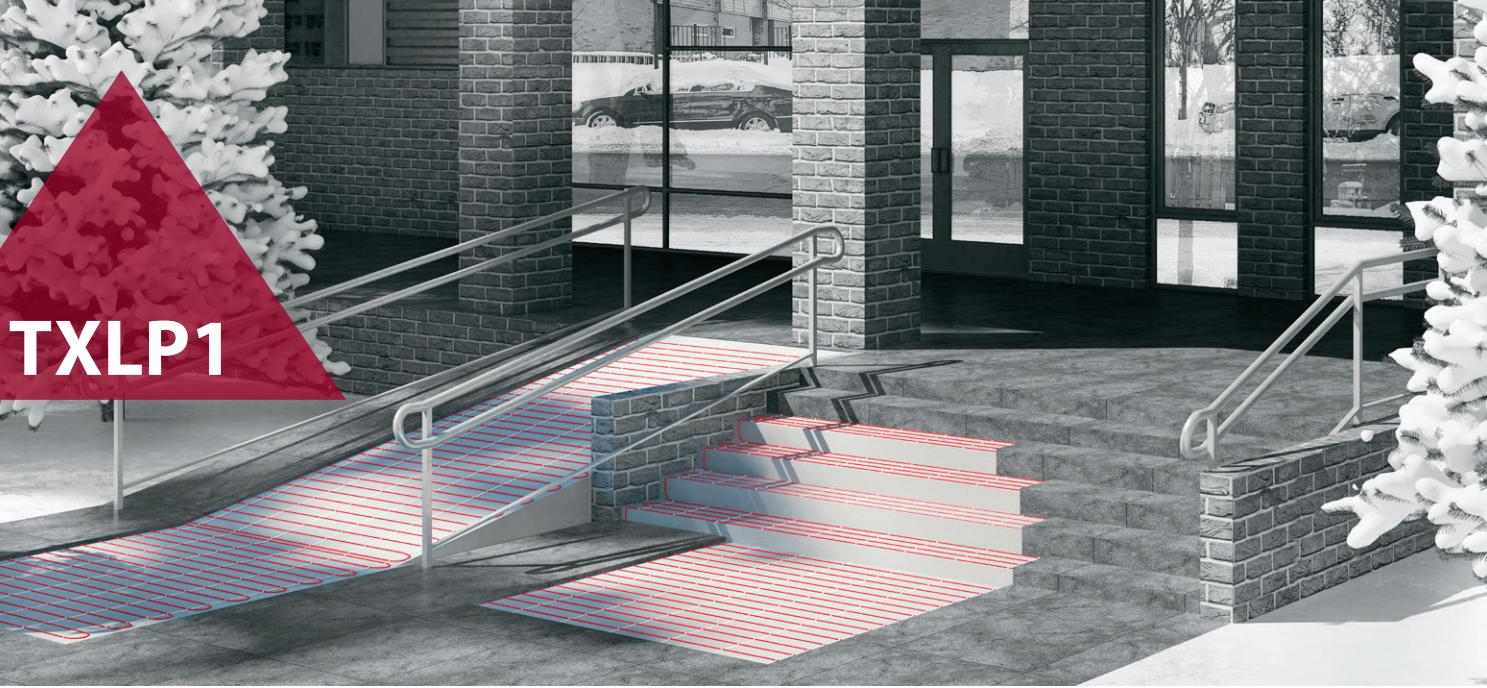
Product # Kit	Product # Factory installed*	Description
OTM-CC <sup>1</sup>	-	CableCheck – Electrical indicator
BRIPTPS-75	-	75 ft. (23 m) galvanized steel cable clip strip for installation
KIT-SP2	-	Repair kit
SM-PLATE <sup>2</sup>	-	Brass marker for embedded electrical heating system
-	100 <sup>3</sup>	Optional 100'(30 m) cold lead

\* For factory installed options, add the option number to the product number.

<sup>1</sup> With any DWS-T order, the accessory OTM-CC can be added free of charge upon customer request.

<sup>2</sup> In compliance with the National Electrical Code (NEC) 426.13 Identification.

<sup>3</sup> Made to order only. Allow additional 9 to 12 weeks lead time.



# TXLP1

## Single Conductor Series Resistance Custom Cable Assembly for Snow Melting and De-icing Applications

### Features

#### Voltage

- 120V to 600V (max).

#### Cold lead

- Standard length 15 ft. (4.57 m).
- Longer lengths available (See Options table).

#### Cable diameter

- 6 mm to 6.5 mm (See Models table for details).

#### Bending radius, minimum

- 5x cable diameter.

#### Maximum operating temperature

- 65 °C (149 °F).

#### Construction

- Stranded resistance heating wire with XLPE insulation, tinned copper grounding conductor, aluminum sheath, and PVC outer jacket.

#### Warranty

- 10-year limited warranty on the resistance cable.

#### Controls

- The slab temperature must be monitored and controlled.  
Requires a ground fault circuit-interrupter (GFCI).

**Made to order product, to obtain a quote please contact factory.**





## TXLP1

Single Conductor Series Resistance Custom Cable Assembly  
for Snow Melting and De-icing Applications



### Models

Cable family	Cable reference #	Resistance (Ohms) per metre	Cable outer diameter mm	Weight per 100 m kg	Weight per 300 ft. lb
TXLP1	10156651	12.7	6.0	4.6	11.1
TXLP1	10156650	7.7	6.0	4.6	11.1
TXLP1	10156649	5.35	6.0	4.6	11.1
TXLP1	10156648	3.5	6.1	4.9	11.8
TXLP1	10156647	2.5	6.1	5.1	12.3
TXLP1	10156646	1.4	6.1	5.0	12.0
TXLP1	10156645	1.0	6.3	5.2	11.8
TXLP1	10156644	0.7	6.3	5.1	12.3
TXLP1	10156613	0.49	6.3	5.3	12.0
TXLP1	10156612	0.3	6.3	5.3	12.8
TXLP1	10156611	0.2	6.3	5.3	12.8
TXLP1	10156610	0.13	6.5	5.6	12.5
TXLP1	10156609	0.09	6.3	5.3	12.8
TXLP1	10156608	0.07	6.5	5.6	13.4
TXLP1	10156607	0.05	6.5	5.7	13.6
TXLP1	10156606	0.02	6.5	5.8	13.8
TXLP1	10156651	12.7	6.0	4.6	11.1
TXLP1	10156650	7.7	6.0	4.6	11.1
TXLP1	10156649	5.35	6.0	4.6	11.1
TXLP1	10156648	3.5	6.1	4.9	11.8
TXLP1	10156647	2.5	6.1	5.1	12.3
TXLP1	10156646	1.4	6.1	5.0	12.0

15 ft. (4.57 m) cold lead included. Longer lengths available in option.

### Options

Product #	Description
<b>Factory installed only</b>	
25	25 ft. (2.3 m) cold lead
50	50 ft. (15 m) cold lead
75	75 ft. (23 m) cold lead
100	100 ft. (30.48 m) cold lead
<b>Kit</b>	
BRIPPS-75	75 ft. (23 m) galvanized steel cable clip strip for installation
KIT-SP3	Repair kit
SM-PLATE <sup>1</sup>	Brass marker for embedded electrical heating system

<sup>1</sup> In compliance with the National Electrical Code (NEC) 426.13 Identification.

### Product description code (example)

Product # TXLP1-10156651-4269-240-341-15  
 Cable family \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ |  
 Cable reference # \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ |  
 Total output (Watts) \_\_\_\_\_ |  
 Voltage \_\_\_\_\_ |  
 Heated length \_\_\_\_\_ |  
 Cold lead length \_\_\_\_\_ |  
 Standard 15 ft. (4.57 m)

Made to order product, to obtain a quote please contact factory.

# ORF-P



## 120V Preassembled Series Resistance Heating Cable for Pipes

### Features

#### Nominal voltage

- 120V.

#### Linear density

- 7 Watts per foot.

#### Cold lead length

- 30 in. (0.76 m).

#### Outer jacket

- PVC.

#### Bus wire

- Nickel plated copper.

#### Minimum bend radius

- 5/16 in. (8 mm).

#### Included hardware

- Built-in bi-metal thermostat energizes the cable when temperature falls below 4 °C (40 °F).
- Grounded 3-pronged plug with indicator light to show when the cable is on.

#### Installation

- Never cut or shorten the heating cable.
- Installation under the insulation of the pipe.
- For indoor and outdoor applications.
- Minimum installation temperature: 0 °C (34 °F).

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Metallic and non-metallic pipes.
- Helps to prevent damage caused by frozen pipes.





ORF-P

120V Preassembled Series Resistance Heating Cable for Pipes



## Models

Product # <sup>1</sup>	Length ft.	Length m	Watts
ORF-P003	3	0.9	21
ORF-P006	6	1.8	42
ORF-P009	9	2.7	63
ORF-P012	12	3.7	84
ORF-P015	15	4.6	105
ORF-P018	18	5.5	126
ORF-P024	24	7.3	168
ORF-P030	30	9.0	210
ORF-P040	40	12.2	280
ORF-P060	60	18.3	420
ORF-P080	80	24.4	560

<sup>1</sup> Must be plugged into a 120V outlet fitted with ground fault protection device (GFCI).

# ORF-R



## 120V Preassembled Series Resistance Heating Cable for Roof and Gutter De-icing

### Features

#### Nominal voltage

- 120V.

#### Linear density

- 5 Watts per foot.

#### Cold lead length

- 30 in. (0.76 m).

#### Outer jacket

- PVC.

#### Bus wire

- Nickel plated copper.

#### Minimum bend radius

- 1/2 in. (12 mm).

#### Included hardware

- Roof clips for cable and spacers.
- Grounded 3-pronged plug with indicator light to show when the cable is on.

#### Installation

- Never cut or shorten the heating cable.
- For outdoor applications only.
- Minimum installation temperature: 0 °C (34 °F).

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Roof and gutter de-icing.





## Models

Product # <sup>1</sup>	Length		Watts
	ft.	m	
ORF-R020	20	6.1	100
ORF-R030	30	9.1	150
ORF-R060	60	18.3	300
ORF-R080	80	24.4	400
ORF-R100	100	30.5	500
ORF-R120	120	36.6	600
ORF-R140	140	42.7	700
ORF-R160	160	48.8	800
ORF-R180	180	54.9	900
ORF-R200	200	61.0	1000
ORF-R240	240	73.2	1200

<sup>1</sup> Must be plugged into a 120V outlet fitted with ground fault protection device (GFCI).

## Options

Product #	Description
KIT-RF-CLIP	Roof clips (25) and spacers (15) for series resistance heating cable
RCR-U	Roof and gutter sentry for automatic de-icing control with humidity probe

# SR-MA



## Micro Self-Regulating Heating Cable SR-MA

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### Features

#### Outer jacket

- Thermoplastic (AO).

#### Bus wire

- Nickel plated copper, 18 AWG.

#### Minimum start-up temperature

- -30 °C (-22 °F).

#### Maximum operating temperature (power on)

- 60 °C (140 °F).

#### Maximum continuous exposure temperature (power off)

- 60 °C (140 °F).

#### Nominal voltage

- 120V.

#### Bending radius, minimum

- 25 mm (1 in.).

#### Installation temperature, minimum

- -45 °C (-49 °F).

#### Standard

- IEEE 515, CSA 22.2 130.03

#### Certification

- FM CUS 3050047

#### Rating

- Wet rated, for outdoor use (WS).

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Heat tracing of metallic and non-metallic pipes, pumps, vessels and valves,
- food processing industry, automotive, refrigeration, sprinkler systems, sewage pipes and intake drain pipes.





SR-MA

Micro Self-Regulating Heating Cable SR-MA

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## Model

Nominal output W/ft.	Product # 120V <sup>1,2</sup>	Cable dimension approx. (mm)
5	ELSR-MA-5-1-AO	8.1 x 5.8

<sup>1</sup> AO Aluminum foil and a thermoplastic outer jacket.<sup>2</sup> When ordering, the quantity on the purchase order is equal to the length in feet of the cable required.

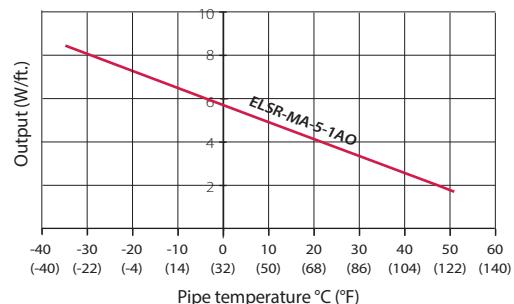
E.g.: To order a 500 ft., cable, write 500 for quantity with product code.

## Heating circuit length

Start-up temperature	Circuit breaker capacity (A)	120V
		Maximum heating circuit (ft.) for ELSR-MA-5-1-AO
10 °C (50 °F)	10	132
	15	190
	20	190
	25	190
0 °C (32 °F)	10	110
	15	174
	20	174
	25	174
-10 °C (14 °F)	10	94
	15	150
	20	161
	25	161
-30 °C (-22 °F)	10	73
	15	117
	20	141
	25	141

## ELSR-MA-5-1-AO output

(on insulated metallic pipes, in accordance with IEEE 515/CSA 22.2 130-03)



## Maximum heating circuit on the following conditions:

- 120 Voltage
- MCB type QO (100% utilization)
- Voltage drop max. 10%
- Single cable fed 1 end

## Accessories

See Accessories section.

# SR-MA-BF



## Micro Self-Regulating Heating Cable SR-MA-BF suitable for use in potable water

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### Features

#### Outer jacket

- Fluoropolymer (BF).

#### Bus wire

- Nickel plated copper, 18 AWG.

#### Minimum start-up temperature

- -30 °C (-22 °F).

#### Maximum operating temperature (power on)

- 60 °C (140 °F).

#### Maximum continuous exposure temperature (power off)

- 60 °C (140 °F).

#### Nominal voltage

- 120V, 240/208V.

#### Bending radius, minimum

- 25 mm (1 in.).

#### Installation temperature, minimum

- -25 °C (-13 °F).

#### Standard

- IEEE 515, CSA 22.2 130.03

#### Certification

- FM CUS 3050047

#### Rating

- Wet rated, for outdoor use (WS).
- PS (2000 kPa/290 psi) (BF).

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Heat tracing of metallic and non-metallic pipes, pumps, vessels and valves,
- Potable water line.





SR-MA-BF

Micro Self-Regulating Heating Cable SR-MA-BF  
suitable for use in potable waterFM  
APPROVEDeltherm®  
innovations in heat tracing

## Models

Nominal output W/ft.	Product # 120V <sup>1,3</sup>	Product # 240V <sup>1,2,3</sup>	Cable dimension approx. (mm)
3	ELSR-MA-3-1-BF	ELSR-MA-3-2-BF	7.7 x 6.4

<sup>1</sup> BF Protective braid, suitable for use in potable water (certified according to NSF/ANSI 61).<sup>2</sup> For operations at 208V, please consult Eltherm® correction factors/multipliers.<sup>3</sup> When ordering, the quantity on the purchase order is equal to the length in feet of the cable required.  
E.g.: To order a 500 ft., cable, write 500 for quantity with product code.

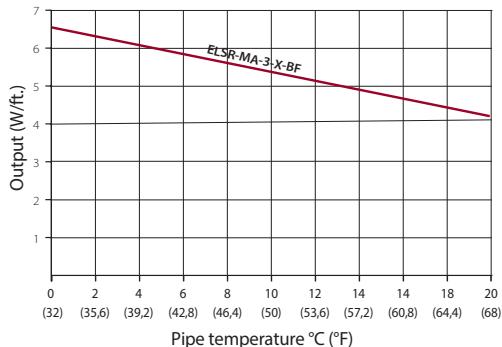
## Heating circuit length

Start-up temperature	Circuit breaker capacity (A)	120V	
		Maximum heating circuit (ft.) for ELSR-MA-3-1-BF	
10 °C (50 °F)	10	139	
	15	167	
	20	167	
	25	167	
0 °C (32 °F)	10	112	
	15	153	
	20	153	
	25	153	

Start-up temperature	Circuit breaker capacity (A)	240V	
		Maximum heating circuit (ft.) for ELSR-MA-3-2-BF	
10 °C (50 °F)	10	241	
	15	302	
	20	302	
	25	302	
0 °C (32 °F)	10	202	
	15	282	
	20	282	
	25	282	

## ELSR-MA-3-X-BF

(in a filled water pipeline)



## Maximum heating circuit on the following conditions:

- 120/240 Voltage
- MCB type QO (100% utilization)
- Voltage drop max. 10%
- Single cable fed 1 end

## Eltherm® correction factors/multipliers for operation of heating cables in 208V

To calculate the corrected power output for operation in 208V, multiply the published output at 240V (in W/ft.) by the nominal output factor provided for the applicable heating cable type.

To calculate maximum heating circuit lengths for operation in 208V (tables provided in product data sheets), multiply the published max. heating circuit length at 240V provided for the applicable heating cable type.

Heating cable correction factors/ Multipliers	Nominal output 208V vs. 240V	Heating circuit length 208V vs. 240V
ELSR-MA-3-2-BF	0.82	1.00

## Accessories

See Accessories section.



**SR-PI**



## 120V Preassembled Self-Regulating Heating Cable for Pipe Tracing for Freeze Protection and Roof and Gutter De-icing

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### Features

#### Outer jacket

- 120V.

#### Cold lead length

- 36" (0.9 m).

#### Outer jacket

- Thermoplastic.

#### Bus wire

- Nickel plated copper.

#### Maximum operating temperature (power on)

- 60 °C (140 °F).

#### Maximum continuous exposure temperature (power off)

- 80 °C (176 °F).

#### Cable section

- 14.1 mm X 5.6 mm.

#### Bending radius, minimum

- 25 mm (1 in.).

#### Included hardware

- Grounded 3-pronged plug with indicator light to show when the cable is on.

#### Minimum installation and start-up temperature

- -25 °C (-13 °F).

#### Standards

- CSA C22.2.130.03; -WS
- CAN/CSA 60079-7-12, 60079-0-11
- ANSI/IEEE 515, 515

#### Certification

- CSA C US 2547790

#### Rating

- Wet rated, for outdoor use (WS).

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Freeze protection, roof and gutter, pipes.





SR-PI

**120V Preassembled Self-Regulating Heating Cable for Pipe Tracing  
for Freeze Protection and Roof and Gutter De-icing**



**eltherm®**  
innovations in heat tracing



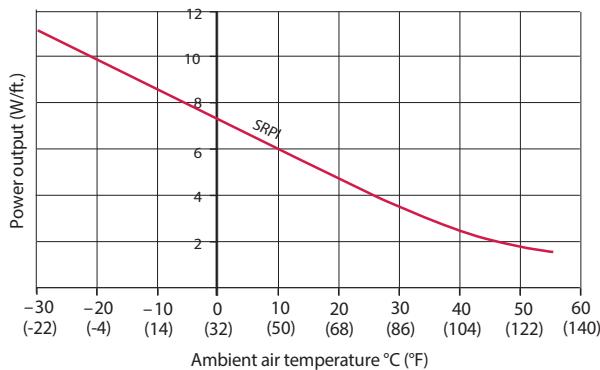
## Models

Product # <sup>1</sup>	Length ft.	Length m	Nominal power output in air condition at 5 °C (40 °F) <sup>2</sup>
ECK-7AO-006	6	1.8	42
ECK-7AO-012	12	3.6	84
ECK-7AO-018	18	5.5	126
ECK-7AO-025	25	7.6	175
ECK-7AO-050	50	15.2	350
ECK-7AO-075	75	22.9	525
ECK-7AO-100	100	30.5	700

<sup>1</sup> Must be plugged into a 120V outlet fitted with ground fault protection device (GFCI).

<sup>2</sup> Because of the cable's self-regulating properties, the power density can reach up to 11 Watts per foot when buried in snow or ice: "wet density". In this situation, use of a 15 Amp. circuit breaker is valid for all models.

## Linear power output in air condition according to operating temperature



## Cable heat output depending on the environment

### In Snow and Ice (120V cable)

- 11W/ft. @ 50 °F (36W/m @ 10 °C)

### In Dry Air

- 7W/ft. @ 50 °F (23W/m @ 10 °C)

# SR-NA



## All Purpose Self-Regulating Heating Cable SR-NA

**eltherm®**  
innovations in heat tracing



### Features

#### Outer jacket

- Thermoplastic (AO).

#### Bus wire

- Nickel plated copper, 16 AWG.

#### Minimum start-up temperature

- -30 °C (-22 °F).

#### Maximum operating temperature (power on)

- 60 °C (140 °F).

#### Maximum continuous exposure temperature (power off)

- 80 °C (176 °F).

#### Nominal voltage

- 120V, 240/208V.

#### Bending radius, minimum

- 25 mm (1 in.).

#### Installation temperature, minimum

- -45 °C (-49 °F).

#### Classification

- II 2G Ex e IIC T6 Gb II 2D Ex tb IIIC
- T 80 °C Db
- Class I, Division 2, Groups A, B, C, D
- Class II, Division 2, Groups E, F, G
- Class III, T6
- Class I, Zone 1, AEx / Exe II, T6
- Class 1, Division 1, Groups B, C, D (Contact manufacturer)

#### Standards

- CSA C22.2.130.03; -WS
- CAN/CSA 60079-7-12, 60079-0-11
- ANSI/IEEE 515, 515

#### Certification

- IECEx EPS 12.0006U
- 12ATEX1431U
- CSA C US 2547790

#### Rating

- Wet rated, for outdoor use (WS).

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Freeze protection, heat tracing instrumentation, pipes, vessel and tanks, chemical and petrochemical industries, food processing, automotive, roof and gutter, sprinkler systems.





SR-NA

All Purpose Self-Regulating Heating Cable SR-NA

eltherm®  
innovations in heat tracing

## Models

Nominal output W/ft.	Product # 120V <sup>1,3</sup>	Nominal output W/ft.	Product # 240V <sup>1,2,3</sup>	Cable dimension approx. (mm)
5	ELSR-NA-5-1-AO	6	ELSR-NA-6-2-AO	13.8 x 5.6

<sup>1</sup> AO Aluminum foil and a thermoplastic outer jacket.<sup>2</sup> For operations at 208V, please consult Eltherm® correction factors/multipliers.<sup>3</sup> When ordering, the quantity on the purchase order is equal to the length in feet of the cable required.

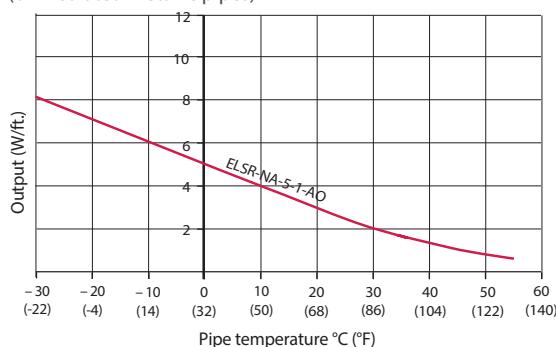
E.g.: To order a 500 ft. cable, write 500 for quantity with product code.

## Heating circuit length

Start-up temperature	120V		240V		
	Circuit breaker capacity (A)	Maximum heating circuit (ft.) for ELSR-NA-5-1-AO	Start-up temperature	Circuit breaker capacity (A)	Maximum heating circuit (ft.) for ELSR-NA-6-2-AO
10 °C (50 °F)	10	125	10 °C (50 °F)	10	170
	15	187		15	255
	20	249		20	340
	25	312		25	425
	30	374		30	510
	35	436		35	595
	40	499		40	857
	10	112		10	154
	15	168		15	231
	20	224		20	308
0 °C (32 °F)	25	280		25	385
	30	336		30	462
	35	392		35	539
	40	448		40	616
	10	102		10	141
	15	153		15	211
	20	204		20	281
	25	255		25	352
	30	306		30	422
	35	357		35	492
-10 °C (14 °F)	40	408		40	563
	10	87		10	120
	15	130		15	180
	20	173		20	240
	25	217		25	300
	30	260		30	360
	35	303		35	420
	40	347		40	480
-30 °C (-22 °F)					

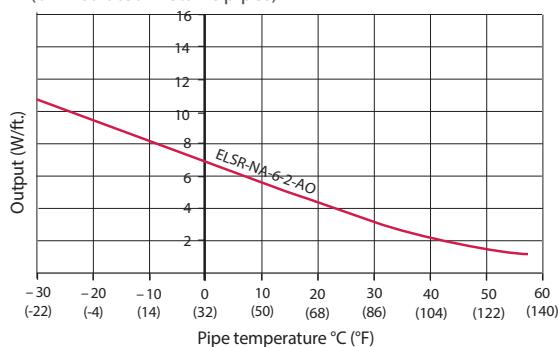
### ELSR-NA-5-1-AO output

(on insulated metallic pipes)



### ELSR-NA-6-2-AO output

(on insulated metallic pipes)



## Eltherm® correction factors/multipliers for operation of heating cables in 208V

To calculate the corrected power output for operation in 208V, multiply the published output at 240V (in W/ft.) by the nominal output factor provided for the applicable heating cable type.

To calculate maximum heating circuit lengths for operation in 208V (tables provided in product data sheets), multiply the published max. heating circuit length at 240V provided for the applicable heating cable type.

Heating cable correction factors/ Multipliers	Nominal output 208V vs. 240V	Heating circuit length 208V vs. 240V
ELSR-NA-X-2	0.88	0.93

## Maximum heating circuit on the following conditions:

- 120/240 Voltage
- MCB type QO (100% utilization)
- Voltage drop max. 10%
- Single cable fed 1 end

## Accessories

See Accessories section.



**PSB**



## All Purpose Self-Regulating Heating Cable PSB

**BARTEC**

### Features

#### Outer jacket

- Polyolefin (CR) / Fluoropolymer (CT).

#### Bus wire

- Nickel plated copper, 16 AWG.

#### Minimum start-up temperature

- -55 °C (-67 °F).

#### Maximum operating temperature (power on)

- 65 °C (150 °F).

#### Maximum continuous exposure temperature (power off)

- 85 °C (185 °F).

#### Nominal voltage

- 120V, 240/208V, 277V.

#### Bending radius, minimum

- 25 mm (1 in.).

#### Installation temperature, minimum

- -55 °C (-67 °F).

#### Classification

- Class I, Division 2, Groups A, B, C, D
- Class II, Division 2, Groups E, F, G
- Class III

#### Certification

- CAN/CSA-C22.2 No. 130-03
- CSA C US 1862457;
- Class: 2878-01, 2878-81
- Class: 2872-01, 2872-81

#### Rating

- Wet rated, for outdoor use (WS).

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Freeze protection, heat tracing instrumentation, pipes, vessel and tanks, chemical and petrochemical industries, food processing, automotive, roof and gutter.

### Models

Nominal output W/ft.	Product # 120V <sup>1,3</sup>	Product # 240V <sup>1,2,3</sup>	Outer jacket/Mechanical shield CR	Outer jacket/Mechanical shield CT	Cable dimension approx. (mm)
3	3PSB1-XX	3PSB2-XX	✓	✓	11.6 x 5.8
5	5PSB1-XX	5PSB2-XX	✓	✓	11.6 x 5.8
8	8PSB1-XX	8PSB2-XX	✓	✓	11.6 x 5.8
10	10PSB1-XX	10PSB2-XX	✓	✓	11.6 x 5.8

<sup>1</sup> XX = Outer jacket/Mechanical shield.

<sup>2</sup> CR Protective braid and a polyolefin outer jacket.

<sup>3</sup> CT Protective braid and a fluoropolymer outer jacket.

<sup>2</sup> For operations at 208V or 277V, please consult Bar tec correction factors/multipliers.

<sup>3</sup> When ordering, the quantity on the purchase order is equal to the length in feet of the cable required.

E.g.: To order a 500 ft. cable, write 500 for quantity with product code.



CR Model



CT Model





PSB

All Purpose Self-Regulating Heating Cable PSB



BARTEC

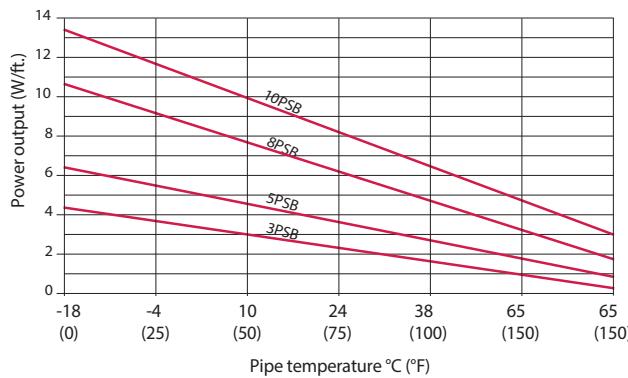
## Heating circuit length

The following table shows the maximum circuit length in ft. for the different PSB trace heater types with standard circuit breaker amperages. Breaker sizes should be based on the National Electrical Code, Canadian Electrical Code or any other local or applicable code. Use only circuit breakers with type C tripping characteristics.

Start-up temperature	Circuit breaker capacity <sup>1</sup> (A)	120V Maximum heating circuit (ft.) for				Start-up temperature	Circuit breaker capacity <sup>1</sup> (A)	240V Maximum heating circuit (ft.) for			
		3PSB1	5PSB1	8PSB1	10PSB1			3PSB2	5PSB2	8PSB2	10PSB2
10 °C (50 °F)	10	197	138	95	75	10 °C (50 °F)	10	371	266	157	102
	15	295	210	141	115		15	554	397	240	151
	20	344	279	190	151		20	673	531	318	203
	25	344	282	217	164		25	673	551	397	253
	30	344	282	217	164		30	673	551	430	305
	35	344	282	217	164		35	673	551	430	328
	40	344	282	217	164		40	673	551	430	328
	10	171	121	82	66		10	325	233	141	89
	15	259	184	125	102		15	489	351	213	135
	20	344	243	167	135		20	653	466	282	180
0 °C (32 °F)	25	344	282	210	164		25	673	551	354	226
	30	344	282	217	164		30	673	551	427	269
	35	344	282	217	164		35	673	551	430	315
	40	344	282	217	164		40	673	551	430	328
	10	154	108	75	59		10	289	207	125	79
	15	230	164	112	92		15	436	312	190	121
	20	308	217	151	121		20	581	417	253	161
	25	344	272	190	151		25	673	518	318	203
	30	344	282	217	164		30	673	551	381	243
	35	344	282	217	164		35	673	551	430	285
-10 °C (14 °F)	40	344	282	217	164		40	673	551	430	325
	10	141	98	69	56		10	266	190	118	75
	15	210	151	105	85		15	400	285	177	112
	20	282	200	141	112		20	535	381	236	151
	25	344	249	174	141		25	669	479	295	187
	30	344	282	210	164		30	673	551	354	226
	35	344	282	217	164		35	673	551	413	262
	40	344	282	217	164		40	673	551	430	302
	10	128	89	62	49		10	240	171	105	66
	15	190	135	95	75		15	361	256	161	102
-18 °C (0 °F)	20	256	180	128	102		20	482	344	213	135
	25	318	226	157	128		25	604	430	266	171
	30	344	269	190	154		30	673	515	322	203
	35	344	282	217	164		35	673	551	374	240
	40	344	282	217	164		40	673	551	430	272
	10	115	82	56	46		10	220	154	95	62
	15	174	121	85	69		15	328	233	144	92
	20	233	164	115	92		20	440	312	194	125
	25	289	203	144	118		25	548	390	243	154
	30	344	246	174	141		30	659	469	292	187
-40 °C (-40 °F)	35	344	282	203	164		35	673	548	341	220
	40	344	282	217	164		40	673	551	390	249

<sup>1</sup> Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The NEC and CEC require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

## Power output 120V/240V under nominal conditions (on insulated steel pipes)



## Maximum heating circuit on the following conditions:

- 120/240 Voltage
- Voltage drop max. 10%
- Single cable fed 1 end
- MCB 80% utilization

## Cable heat output depending on the environment

### In Snow and Ice

- 13W/ft. @ 32 °F (42W/m @ 0 °C)

### In Dry Air

- 8W/ft. @ 32 °F (26W/m @ 0 °C)

## Accessories

See Accessories section.

## Bartec correction factors/multipliers for operation of heating cables in 208V and 277V

To calculate the corrected power output for operation in 208V or 277V, multiply the published output at 240V (in W/ft.) by the nominal output factor provided for the applicable heating cable type.

To calculate maximum heating circuit lengths for operation in 208V or 277V (tables provided in product data sheets), multiply the published max. heating circuit length at 240V provided for the applicable heating cable type.

Due to the cable's self-regulating properties, the power density can reach up to 11W/ft. (120V) and 13W/ft. (240V) when buried in snow or ice: "wet density".

Adjustment factors	Heating cable correction factors/ Multipliers	Nominal output	Heating circuit length
208V	3PSB2	0.90	0.96
	5PSB2	0.93	0.94
	8PSB2	0.95	0.92
	10PSB2	0.97	0.92
277V	3PSB2	1.23	1.09
	5PSB2	1.19	1.10
	8PSB2	1.11	1.14
	10PSB2	1.06	1.16



# MSB



## Medium Temperature Self-Regulating Heating Cable MSB

**BARTEC**

### Features

#### Outer jacket

- Fluoropolymer (CT).

#### Bus wire

- Nickel plated copper, 16 AWG.

#### Minimum start-up temperature

- -60 °C (-76 °F).

#### Maximum operating temperature (power on)

- 110 °C (230 °F).

#### Maximum continuous exposure temperature (power off)

- 110 °C (230 °F), continuous.
- 130 °C (266 °F), power off for 1000 hr cumulative.

#### Nominal voltage

- 120V, 240/208V, 277V.

#### Bending radius, minimum

- 25 mm (1 in.).

#### Installation temperature, minimum

- -60 °C (-76 °F).

#### Classification

- Ex 60079-30-1 IIC T3, T4 Gb
- Ex 60079-30-1 IIIC T170 °C, T130 °C Db
- Class I, Division 2, Groups A, B, C, D
- Class II, Division 2, Groups E, F, G
- Class III, T4 3MSB, 5MSB
- Class III, T3 10MSB, 15MSB, 20MSB

#### Standards

- CSA C22.2.130.16; -WS
- Ex CAN/CSA 60079-30 IIC T3, T4b
- 60079-30 IIIC T170 °C, T 130 °C Db
- IEEE 515.1-2012, 515-2017

#### Certification

- IECEx DEK 17.0004U
- CSA C US 1862457

#### Rating

- Wet rated, for outdoor use (WS).

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Freeze protection, heat tracing instrumentation, pipes, vessel and tanks, chemical and petrochemical industries, food processing, automotive.





MSB

Medium Temperature Self-Regulating Heating Cable MSB



BARTEC

## Models

Nominal output W/ft.	Product #		Cable dimension approx. (mm)
	120V <sup>1,3</sup>	240V <sup>1,2,3</sup>	
3	3MSB1-CT	3MSB2-CT	10.2 x 4.8
5	5MSB1-CT	5MSB2-CT	10.2 x 4.8
10	10MSB1-CT	10MSB2-CT	10.2 x 4.8
15	15MSB1-CT	15MSB2-CT	10.2 x 4.8
20	20MSB1-CT	20MSB2-CT	10.2 x 4.8

<sup>1</sup> CT Protective braid and a fluoropolymer outer jacket.<sup>2</sup> For operations at 208V, please consult Bartec correction factors/multipliers.<sup>3</sup> When ordering, the quantity on the purchase order is equal to the length in feet of the cable required.

E.g.: To order a 500 ft., cable, write 500 for quantity with product code.

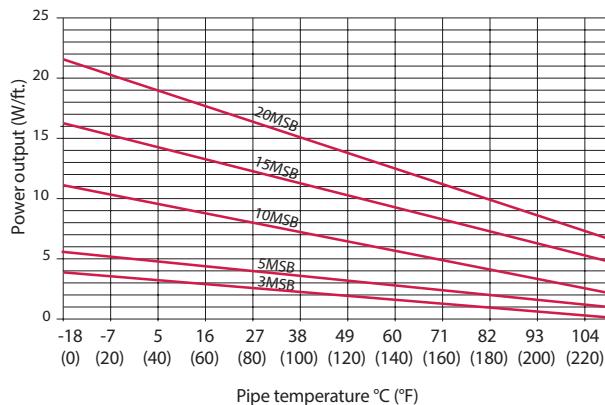
## Heating circuit length

The following table shows the maximum circuit length in ft. for the different MSB trace heater types with standard circuit breaker amperages. Breaker sizes should be based on the National Electrical Code, Canadian Electrical Code or any other local or applicable code. Use only circuit breakers with type C tripping characteristics.

Start-up temperature	Circuit breaker capacity <sup>1</sup> (A)	120V Maximum heating circuit (ft.) for					Start-up temperature	Circuit breaker capacity <sup>1</sup> (A)	240V Maximum heating circuit (ft.) for				
		3MSB1	5MSB1	10MSB1	15MSB1	20MSB1			3MSB2	5MSB2	10MSB2	15MSB2	20MSB2
10 °C (50 °F)	20	394	279	157	115	89	10 °C (50 °F)	20	755	538	302	220	171
	30	394	322	226	138	128		30	761	627	443	276	253
	40	394	322	226	138	128		40	761	627	443	276	253
-18 °C (0°F)	20	338	243	135	98	79	-18 °C (0°F)	20	646	469	259	190	148
	30	394	322	203	138	118		30	761	627	390	276	223
	40	394	322	226	138	128		40	761	627	443	276	253
-29 °C (-20 °F)	20	322	233	128	95	75	-29 °C (-20 °F)	20	614	446	246	180	141
	30	394	322	194	138	112		30	761	627	371	272	210
	40	394	322	226	138	128		40	761	627	443	276	253
-40 °C (-40 °F)	20	305	322	121	92	72	-40 °C (-40 °F)	20	584	427	236	174	135
	30	394	322	184	135	105		30	761	627	354	259	200
	40	394	322	226	138	128		40	761	627	443	276	253

<sup>1</sup> Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The NEC and CEC require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

## Power output 120V/240V under nominal conditions (on insulated steel pipes)



## Maximum heating circuit on the following conditions:

- 120/240 Voltage
- Voltage drop max. 10%
- Single cable fed 1 end

## Accessories

See Accessories section.

## Bartec correction factors/multipliers for operation of heating cables in 208V and 277V

To calculate the corrected power output for operation in 208 or 277V, multiply the published output at 240V (in W/ft.) by the nominal output factor provided for the applicable heating cable type.

To calculate maximum heating circuit lengths for operation in 208V or 277V (tables provided in product data sheets), multiply the published max. heating circuit length at 240V provided for the applicable heating cable type.

Adjustment factors	Heating cable correction factors/ Multipliers	Nominal output	Heating circuit length
208V	3MSB2	0.83	0.99
	5MSB2	0.85	0.98
	10MSB2	0.92	0.94
	15MSB2	0.95	0.93
	20MSB2	0.97	0.91
277V	3MSB2	1.37	1.03
	5MSB2	1.31	1.05
	10MSB2	1.19	1.02
	15MSB2	1.15	1.12
	20MSB2	1.09	1.13



# HSB



## High Temperature Self-Regulating Heating Cable HSB



### Features

#### Outer jacket

- Fluoropolymer (CT).

#### Bus wire

- Nickel plated copper, 16 AWG.

#### Minimum start-up temperature

- -60 °C (-76 °F).

#### Maximum operating temperature (continuous)

- 120 °C (248 °F).

#### Maximum continuous exposure temperature (power off)

- 200 °C (392 °F), continuous.
- 190 °C (374 °F), power off for 1000 hr cumulative.

#### Nominal voltage

- 120V, 240/208V.

#### Bending radius, minimum

- 25 mm (1 in.).

#### Installation temperature, minimum

- -60 °C (-76 °F).

#### Classification

- Class I, Division 2, Groups A, B, C, D
- Class II, Division 2, Groups E, F, G
- Class III

#### Certification

- CAN/CSA-C22.2 No. 130-03
- CSA C US 1862457;  
Class: 2878-01, 2878-81  
Class: 2872-01, 2872-81

#### Rating

- Wet rated, for outdoor use (WS).

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Freeze protection, heat tracing instrumentation, pipes, vessel and tanks, chemical and petrochemical industries, food processing, automotive.





HSB

High Temperature Self-Regulating Heating Cable HSB



BARTEC

## Models

Nominal output W/ft.	Product #		Cable dimension approx. (mm)
	120V <sup>1,3</sup>	240V <sup>1,2,3</sup>	
5	5HSB1-CT	5HSB2-CT	10.2 x 4.8
10	10HSB1-CT	10HSB2-CT	10.2 x 4.8
15	15HSB1-CT	15HSB2-CT	10.2 x 4.8
20	20HSB1-CT	20HSB2-CT	10.2 x 4.8

<sup>1</sup> CT Protective braid and a fluoropolymer outer jacket.<sup>2</sup> For operations at 208V, please consult Bartec correction factors/multipliers.<sup>3</sup> When ordering, the quantity on the purchase order is equal to the length in feet of the cable required.

E.g.: To order a 500 ft., cable, write 500 for quantity with product code.

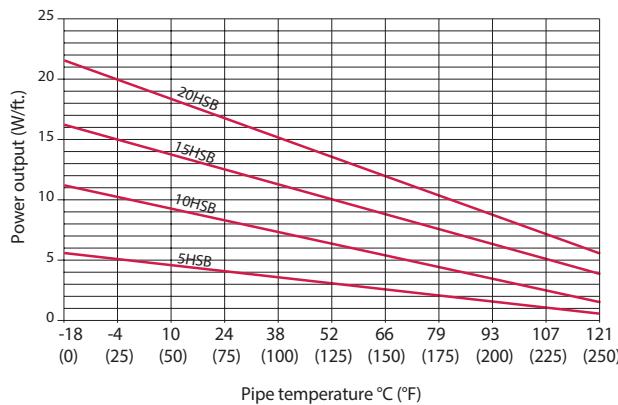
## Heating circuit length

The following table shows the maximum circuit length in ft. for the different HSB trace heater types with standard circuit breaker amperages. Breaker sizes should be based on the National Electrical Code, Canadian Electrical Code or any other local or applicable code. Use only circuit breakers with type C tripping characteristics.

Start-up temperature	Circuit breaker capacity <sup>1</sup> (A)	120V				240V			
		5HSB1	10HSB1	15HSB1	20HSB1	5HSB1	10HSB1	15HSB1	20HSB1
10 °C (50 °F)	20	279	157	115	89	20	538	302	220
	30	322	226	138	128	30	627	443	276
	40	322	226	138	128	40	627	443	276
-18 °C (0 °F)	20	243	135	98	79	20	469	259	190
	30	322	203	138	118	30	627	390	276
	40	322	226	138	128	40	627	443	276
-29 °C (-20 °F)	20	233	128	95	75	20	446	246	180
	30	322	194	138	112	30	627	371	272
	40	322	226	138	128	40	627	443	276
-40 °C (-40 °F)	20	322	121	92	72	20	427	236	174
	30	322	184	135	105	30	627	354	259
	40	322	226	138	128	40	627	443	276

<sup>1</sup> Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The NEC and CEC require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

## Power output 120V/240V under nominal conditions (on insulated steel pipes)



## Bartec correction factors/multipliers for operation of heating cables in 208V

To calculate the corrected power output for operation in 208V, multiply the published output at 240V (in W/ft.) by the nominal output factor provided for the applicable heating cable type.

To calculate maximum heating circuit lengths for operation in 208V (tables provided in product data sheets), multiply the published max. heating circuit length at 240V provided for the applicable heating cable type.

Adjustment factors	Heating cable correction factors/Multipliers	Nominal output	Heating circuit length
5HSB2-CT	0.85	0.98	
10HSB2-CT	0.92	0.94	
15HSB2-CT	0.95	0.93	
20HSB2-CT	0.97	0.91	

## Maximum heating circuit on the following conditions:

- 120/240 Voltage
- Voltage drop max. 10%
- Single cable fed 1 end

## Accessories

See Accessories section.



**PF**



## High Temperature Constant Wattage Heating Cable PF

### Features

#### Outer jacket

- Stainless steel braided (SB).

#### Bus wire

- Tinned copper.

#### Maximum maintenance temperature (continuous)

- 93 °C (200 °F).

#### Maximum exposure temperature (intermittent)

- 204 °C (400 °F).

#### Nominal voltage

- See table Watts/ft. (m) at alternate voltages.

#### Bending radius, minimum

- 25 mm (1 in.).

#### Installation temperature, minimum

- -21 °C (-5 °F).

#### Approvals

- Ordinary locations: FM Approved for pipe tracing
- Hazardous locations: FM Approved for Class I, Division 2, Groups B, C, and D

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Freeze protection and process heating applications.





PF

High Temperature Constant Wattage Heating Cable PF



## Models

Product # <sup>1</sup>	Volts	Nominal output		Amp.		Zone length <sup>2</sup>		Max. circuit length <sup>3</sup>	
		W/ft.	W/m	ft.	m	in.	cm	ft.	m
PF-3-SB	208	2.7	9	.013	.04	48	122	710	216
PF-6-SB	120	6.0	20	.050	.16	24	61	280	85
PF-7-SB	120	8.0	26	.067	.22	24	61	240	73
PF-8-SB	120	1.8	6	.015	.05	24	61	480	146
PF-10-SB	208	8.9	29	.043	.14	24	61	390	119
PF-12-SB	480	12.0	39	.025	.08	48	122	780	238

<sup>1</sup> Standard stainless steel braided.<sup>2</sup> One complete heating zone is the distance between two successive bus connections.<sup>3</sup> Maximum circuit length is defined as the length of cable at which the heat output, due to voltage drop, decreases to 90 percent of the heat output at the power connection point.

## Watts/ft. (m) at alternate voltages

Product #	120V	208V	240V	277V	480V
PF-3-SB	-	3 (9)	4 (12)	5 (16)	-
PF-6-SB	6 (20)	-	-	-	-
PF-7-SB	8 (26)	-	-	-	-
PF-8-SB	2 (6)	5 (18)	7 (23)	9 (13)	-
PF-10-SB	3 (10)	9 (29)	12 (39)	-	-
PF-12-SB	-	-	3 (10)	4 (13)	12 (39)

## Zone marker:

Zone Markers for PF series cable may be raised bumps, or depressions on the edge of the cable. (Braid may have to be pulled away to locate.)

## Use of ground fault protective devices and metallic overshield

### NEC CODE 2017, ARTICLE 427-22:

Equipment Protection. Ground-fault protection of equipment shall be provided for electric heat tracing and heating panels. This requirement shall not apply in industrial establishments where there is alarm indication of ground faults and the following conditions apply:

- (1) Conditions of maintenance and supervision ensure that only qualified persons service the installed systems.
- (2) Continued circuit operation is necessary for safe operation of equipment or processes.

### NEC CODE 2017, ARTICLE 427-23:

Grounded Conductive Covering. Electric heating equipment shall be listed and have a grounded conductive covering in accordance with 427.23(A) or (B). The conductive covering shall provide an effective ground path for equipment protection.

(a) Heating Wires or Cables. Heating wires or cables shall have a grounded conductive covering that surrounds the heating element and bus wires, if any, and their electrical insulation.

## Product description code (example)

Product #	PF-3-SB
Product Family	_____
Product Number	_____
Stainless Steel Braided (SB)	_____

The material contained in this document is presented in good faith and believed to be reliable and accurate. However, because testing conditions may vary and material quality or information that may be provided in whole or in part by others may be beyond our control, no warranty, expressed or implied, is given. Delta-Therm can assume no liability for results obtained or damages incurred through the application of the data and tests presented.

## Accessories

See Accessories section.



**PT**



## Ultra High Temperature Constant Wattage Heating Cable PT

### Features

#### Outer jacket

- Stainless steel braided (SB).

#### Bus wire

- Nickel plated copper.

#### Maximum maintenance temperature (continuous)

- 204 °C (400 °F).

#### Maximum exposure temperature (intermittent)

- 288 °C (550 °F).

#### Nominal voltage

- See table Watts/ft. (m) at alternate voltages.

#### Bending radius, minimum

- 25 mm (1 in.).

#### Installation temperature, minimum

- -21 °C (-5 °F).

#### Approvals

- Ordinary locations: FM Approved for pipe tracing
- Hazardous locations: FM Approved for Class I, Division 2, Groups B, C, and D

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Freeze protection and process heating applications.





PT

Ultra High Temperature Constant Wattage Heating Cable PT



## Models

Product # <sup>1</sup>	Volts	Nominal output		Amp.		Zone length <sup>2</sup>		Max. circuit length <sup>3</sup>	
		W/ft.	W/m	ft.	m	in.	cm	ft.	m
PT-3-SB	120	3	10	.025	.08	24	61	390	119
PT-6-SB	120	6	20	.050	.16	24	61	280	85
PT-8-SB	240	8	26	.033	.11	24	61	480	146
PT-10-SB	120	10	33	.083	.27	24	61	210	64

<sup>1</sup> Standard stainless steel braided.<sup>2</sup> One complete heating zone is the distance between two successive bus connections.<sup>3</sup> Maximum circuit length is defined as the length of cable at which the heat output, due to voltage drop, decreases to 90 percent of the heat output at the power connection point.

## Watts/ft. (m) at alternate voltages

Product #	120V	208V	240V	277V
PT-3-SB	3 (10)	9 (30)	12 (39)	-
PT-6-SB	6 (20)	-	-	-
PT-8-SB	2 (7)	6 (20)	8 (26)	11 (35)
PT-10-SB	10 (33)	-	-	-

## Zone marker:

Zone Markers for PF series cable may be raised bumps on the edge of the cable. (Braid may have to be pulled away to locate.)

## Use of ground fault protective devices and metallic overshield

### NEC CODE 2017, ARTICLE 427-22:

Equipment Protection. Ground-fault protection of equipment shall be provided for electric heat tracing and heating panels. This requirement shall not apply in industrial establishments where there is alarm indication of ground faults and the following conditions apply:

(1) Conditions of maintenance and supervision ensure that only qualified persons service the installed systems.

(2) Continued circuit operation is necessary for safe operation of equipment or processes.

### NEC CODE 2017, ARTICLE 427-23:

Grounded Conductive Covering. Electric heating equipment shall be listed and have a grounded conductive covering in accordance with 427.23(A) or (B). The conductive covering shall provide an effective ground path for equipment protection.

(a) Heating Wires or Cables. Heating wires or cables shall have a grounded conductive covering that surrounds the heating element and bus wires, if any, and their electrical insulation.

## Product description code (example)

Product #	PT-3-SB
Product Family	_____
Product Number	_____
Stainless Steel Braided (SB)	_____

The material contained in this document is presented in good faith and believed to be reliable and accurate. However, because testing conditions may vary and material quality or information that may be provided in whole or in part by others may be beyond our control, no warranty, expressed or implied, is given. Delta-Therm can assume no liability for results obtained or damages incurred through the application of the data and tests presented.

## Accessories

See Accessories section.



# BPL



## High Temperature Constant Wattage Heating Cable BPL

**BARTEC**

### Features

#### Outer jacket

- Aluminum.

#### Bus wire

- Nickel plated copper.

#### Minimum start-up temperature

- -40 °C (-40 °F).

#### Maximum exposure temperature

- 350 °C (662 °F), continuous.

- 425 °C (797 °F), intermittent.

#### Nominal voltage

- 110 to 120V, 208 to 277V.

- For 277V applications please contact factory.

#### Bending radius, minimum

- 25 mm (1 in.).

#### Installation temperature, minimum

- -40 °C (-40°F).

#### Classification

- II 2G Ex e II T\* Gb
- II 2D Ex tb IIIC T\* Db

#### Standards

- Class I, Division 2, Groups A, B, C, D
- Class II, Division 2, Groups E, F, G
- Class III.
- T1 to T3 (see table maximum pipe/work piece temperature)

#### Certification

- ATEX, IECEEx, EAC\*
- CSA 1350782 / 1352981

#### Warranty

- 2-year basic warranty on the heating cable.

#### Application

- Installation in non-hazardous and hazardous areas (Class 1, Division 2).





BPL

High Temperature Constant Wattage Heating Cable BPL



BARTEC

## Maximum circuit length

Start-up temperature	Circuit breaker capacity <sup>1</sup> (A)	120V Maximum heating circuit length (ft.) for			
		5BPL1-AL	10BPL1-AL	15BPL1-AL	20BPL1-AL
10 °C (50 °F)	20	291	178	121	85
	30	291	210	162	97
	40	291	210	162	131
-18 °C (0 °F)	20	275	162	108	78
	30	275	194	152	87
	40	275	194	152	124
-40 °C (-40 °F)	20	259	146	114	72
	30	259	178	145	81
	40	259	178	145	118

Start-up temperature	Circuit breaker capacity <sup>1</sup> (A)	240V Maximum heating circuit length (ft.) for			
		5BPL2-AL	10BPL2-AL	15BPL2-AL	20BPL2-AL
10 °C (50 °F)	20	567	340	246	170
	30	567	405	344	278
	40	567	405	344	278
-18 °C (0 °F)	20	550	324	229	164
	30	550	388	328	262
	40	550	388	328	262
-40 °C (-40 °F)	20	518	307	213	147
	30	518	372	311	255
	40	518	372	311	255

Start-up temperature	Circuit breaker capacity <sup>1</sup> (A)	208V Maximum heating circuit length (ft.) for			
		5BPL2-AL	10BPL2-AL	15BPL2-AL	20BPL2-AL
10 °C (50 °F)	20	518	324	194	146
	30	518	356	275	227
	40	518	356	275	227
-18 °C (0 °F)	20	502	308	185	136
	30	502	340	266	217
	40	502	340	266	217
-40 °C (-40 °F)	20	470	292	178	130
	30	470	324	259	211
	40	470	324	259	211

Start-up temperature	Circuit breaker capacity <sup>1</sup> (A)	277V Maximum heating circuit length (ft.) for			
		5BPL2-AL	10BPL2-AL	15BPL2-AL	20BPL2-AL
10 °C (50 °F)	20	639	328	203	147
	30	639	442	321	229
	40	639	442	344	301
-18 °C (0 °F)	20	623	311	193	144
	30	623	426	308	223
	40	623	426	328	288
-40 °C (-40 °F)	20	606	314	190	138
	30	606	410	301	216
	40	606	410	311	282

<sup>1</sup> Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The NEC and CEC require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

Power conversion factors	Power output	Zone length BPL1-AL	in.	mm	Zone length BPL2-AL	in.	mm
110V	0.84	5BPL1-AL	31.5	800	5BPL2-AL	48.0	1220
208V	0.75	10BPL1-AL	27.6	700	10BPL2-AL	35.4	900
277V	1.33	15BPL1-AL	24.6	625	15BPL2-AL	29.9	760
		20BPL1-AL	19.7	500	20BPL2-AL	25.6	650

## Max. pipe/work piece temperatures (120V or 240V)<sup>1</sup>

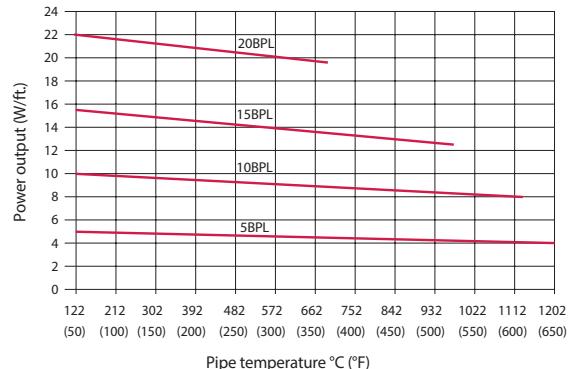
Product #	W/m	Area classification hazardous <sup>2</sup>				Safe <sup>3</sup>	
		T3 °C	T3 °F	T2 °C	T2 °F		
5BPL-AL	15	160	320	289	552	350	662
10BPL-AL	30	100	212	246	475	323	613
15BPL-AL	50	30	86	178	352	276	529
20BPL-AL	70	-	-	80	176	185	365

<sup>1</sup> For 277 V applications contact factory representative

<sup>2</sup> Surface temperature limits in accordance with EN60079

<sup>3</sup> Surface temperature limited by materials of construction (maximum exposure temperature, intermittent)

## Power temperature curves 120V and 240V



## Models

Nominal output W/ft.	Product # 120V	Product # 240V	Nominal output W/ft.	Product # 208V	Cable dimension approx. (mm)
5	5BPL1-AL	5BPL2-AL	4	5BPL2-AL	10.7 x 7.7
10	10BPL1-AL	10BPL2-AL	7.5	10BPL2-AL	10.7 x 7.7
17	15BPL1-AL	15BPL2-AL	12.5	15BPL2-AL	10.7 x 7.7
22	20BPL1-AL	20BPL2-AL	17.5	20BPL2-AL	10.7 x 7.7

When ordering, the quantity on the purchase order is equal to the length in feet of the cable required.

E.g.: To order a 500 ft., cable, write 500 for quantity with product code.

## Accessories

See Accessories section.

# ELKM-AG-NA



## Fluoropolymer Insulated Series Resistance Heating Cable

**eltherm®**  
innovations in heat tracing

### Features

#### Outer jacket

- Fluoropolymer.

#### Bus wire

- Nickel plated copper.

#### Maximum operating temperature

- 250 °C (482 °F).

#### Nominal voltage, maximum

- 0-750V, AC and DC voltages applicable.

#### Output, max.

- 30 W/m.

*Note: The output per unit length of the heating cable and the maximum possible operating temperatures depend on the respective application. Please contact the factory for application specific requirements and calculations.*

#### Bending radius, minimum

- 10 mm (0.4 in.).

#### Installation temperature, minimum

- -60 °C (-76 °F).

#### Classification

##### ELKM-AG-NA (non-hazardous area):

- Industrial and commercial applications, Canada USA

##### NB Environment (hazardous area):

- Class I Division 2 Group A, B, C, D
- Class II Division 1 Group E, F, G
- Class III Division 1
- Class I Zone 1 AEx de IIC T6...T2 / Ex de IIC
- T6...T2 Gb

##### NC Environment (hazardous area):

- Class I Division 1 Group A, B, C, D

#### Standards

- FM16NUS0004
- FM16US0124X
- FM16NC0003
- FM16CA0069X

#### Certification

- IEC/IEEE 60070-30-1, IEEE 515
- CSA 22.2 130-16

#### Rating

- Wet rated, for outdoor use (WS).

#### Warranty

- 1-year basic warranty on the heating cable.

#### Application

- Product line heat tracing (crude oil, natural gas, caustic soda, waste water and product transfer lines), tank and vessel heat tracing, pipe, valve and pump heating, tank container heating, IBC's, storage facility heating, viscosity control and instrumentation heat tracing.

**Made to order product, to obtain a quote please contact factory.**





ELKM-AG-NA

Fluoropolymer Insulated Series Resistance Heating Cable

eltherm®  
innovations in heat tracing

## Cable Specifications

Nominal resistance (Ω/ft.)	Outer diameter approx. in.	Outer diameter approx. mm	Weight approx. lb/ft.	Temperature coefficient (x 10 <sup>-3</sup> / K)	Nominal resistance (Ω/ft.)	Outer diameter approx. in.	Outer diameter approx. mm	Weight approx. lb/ft.	Temperature coefficient (x 10 <sup>-3</sup> / K)
0.0036 (Cu 1.5 mm <sup>2</sup> )	0.23	5.9	0.0511	4.30	0.1463	0.22	5.4	0.0412	0.18
0.0152	0.21	5.4	0.0461	1.60	0.1829	0.21	5.3	0.0394	0.18
0.0198	0.22	5.5	0.0429	1.60	0.2438	0.20	5.2	0.0375	0.18
0.0244	0.23	5.9	0.0491	0.90	0.3048	0.21	5.3	0.0394	0.04
0.0305	0.22	5.7	0.0461	0.90	0.4481	0.20	5.2	0.0370	0.04
0.0479	0.22	5.7	0.0459	0.45	0.5334	0.20	5.2	0.0368	0.04
0.0549	0.21	5.4	0.0404	0.90	0.5791	0.22	5.4	0.0402	0.40
0.0610	0.22	5.5	0.0429	0.45	0.8839	0.20	5.2	0.0374	0.40
0.0792	0.21	5.4	0.0408	0.45	1.2192	0.20	5.1	0.0356	0.40
0.0853	0.21	5.3	0.0388	0.38	1.4326	0.20	5.0	0.0349	0.15
0.1036	0.21	5.3	0.0386	0.45	1.8288	0.20	5.0	0.0343	0.20
0.1097	0.20	5.2	0.0382	0.45	2.1336	0.19	5.0	0.0336	0.15
0.1311	0.23	5.5	0.0422	0.18	2.4384	0.19	4.9	0.0332	0.15

Weight tolerances are possible for manufacturing reasons.

Resistance tolerance: +/- 5 %.

For applications with fixed external diameter,  
please contact the factory.

Cables shall neither intersect nor contact.

Ground fault protection device 30 mA required for each circuit.

## Options

Product #	Environment	Description
EL-HAZELECT-AG	NC	Connection kit 1/2" NPT Class I Div 1 and 2 Group ABCD, Class II Div 1 and 2 Groups EFG, Class III, Class I Zone 1 Group IIC
ELVB-AG-NA-NB-NC	NA/NB/NC	Splice kit for ELKM-AG-NA all environments (set of 2)
ELVB-NA-38	NA	Cable gland connection kit for ELKM-AG-NA NEC/CEC 3/8" NPT non-hazardous area
ELVB-NA-M12	NA	Cable gland connection kit for ELKM-AG-NA NEC/CEC M12 x 1.5 non-hazardous area
ELVB-NB-12	NB	Cable gland connection kit for ELKM-AG-NA NEC/CEC 1/2" NPT hazardous area
ELVB-NB-M16	NB	Cable gland connection kit for ELKM-AG-NA NEC/CEC M16 x 1.5 hazardous area

**Made to order,  
please contact factory for design assistance.**

**ELK-AG-NA may be supplied on spools and field terminated, provided the following conditions are met:**

Heating circuit design to be carried out or approved by the factory.

Only Eltherm supplied and certified termination kits may be used.

Heating circuit installation and start-up to be performed by qualified personnel only.

Eltherm product and approval markings to be applied to product.

## Product description code (example)

Product #                   **ELKM-AG-NA-00549**  
 Product Family \_\_\_\_\_  
 ELKM-AG-NA: Normal Environment \_\_\_\_\_  
 Nominal resistance \_\_\_\_\_  
 (without the dot ".")

## For hazardous area

**ELKM-AG-NA cable** is approved for all environments.

For hazardous area applications please refer to the Options table to select the proper termination kit.

**NB:** Class 1 Division 2

**NC:** Class 1 Division 1

**Made to order product, to obtain a quote please contact factory.**



# MI



## Mineral Insulated (M.I.) Cable Assembly - One and Two Conductor

### Features

#### Available sheath

- C: Bare copper.
- R: LSZH<sup>1</sup> Jacketed copper.
- SS: 825 Alloy seamless sheath.

#### Nominal voltages

- 120 to 480V

#### Temperature ratings

- See table.

#### Fire resistant

- M.I. heating cable is made of inorganic materials.
- It will not burn or support combustion.

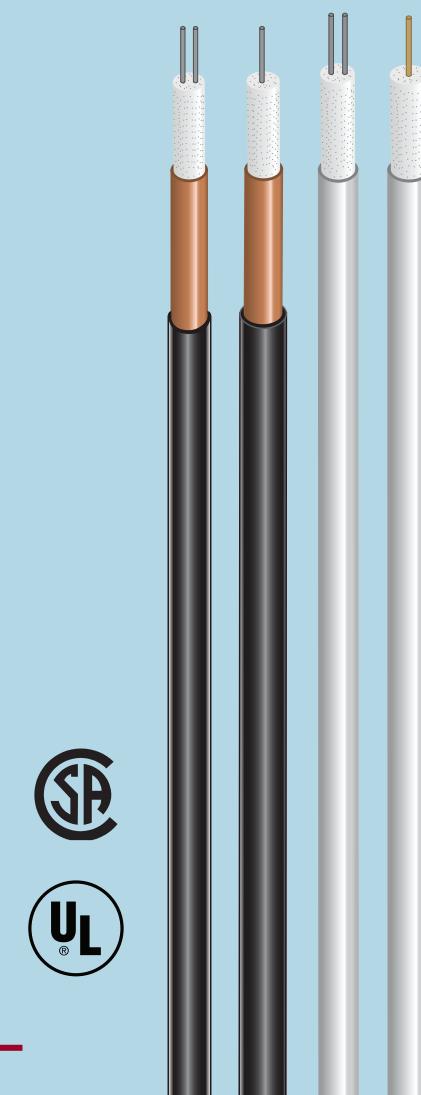
#### Corrosion resistant

- LSZH Jacketed cables and 825 Alloy cables are corrosion resistant.
- Flexible, no degradation and low installation cost.

#### Standard cold lead lengths

- 20'(6 m) 19-strand THWN cold leads are standard on all M.I. heating cable assemblies.
- If longer cold leads are needed, specify at time of order. Cold lead can be of any length up to 200' (61 m).

**Made to order product, to obtain a quote please contact factory.**





MI

**Mineral Insulated (M.I.) Cable Assembly**  
One and Two Conductor



## M.I. heating cable assembly base kit (supplied w/each M.I. heating cable assembly)

- Thermal Gradient (TG) section.
- THWN 19-strand cold leads.
- Pressure connectors.
- "A", "T", or "C" conduit body with gasket and cover.
- Delta dry (water repellent powder).
- Duct seal.
- Installation instructions.
- Factory assembled and tested.

## Cold lead wire size (Chart 1)

Amps	AWG	Type	1 Conductor conduit body type	2 Conductor conduit body type
0-16	12	Stranded	T	C
16-24	10		T	C
24-32	8		A	Not available
32-40	6		A	Not available

## M.I. heating cable assembly splice kits

- Are available. Call Delta-Therm.

## Application chart and recommendations (Chart 2)

Primary application	Application type	Prefix	Target watts	Target spacing in.	Target cable configuration	Standard thermal gradient length ft.	Standard cold leads ft.	Listing / Certification
Snow melting	Pedestrian	S	27	6	Z1C	2.5	20	UL/CSA
	Vehicular	S	22.5	6	Z1C	2.5	20	UL/CSA
Roof/Gutter	Hangar door	H	25	6	Z2C	2.5	20	UL/CSA
	Metal	M	8	6	2C	5	20	UL/CSA
Pipe/Tank trace	Plastic composite	R	6	6	Z2C	5	20	UL/CSA
	External	P	See design	6	2C	5	20	UL/CSA
Permafrost prevention	Internal <sup>1</sup>	IP	See design	6	2C	5	20	CSA
	In conduit <sup>1</sup>	T	12	48	2C	3	20	CSA
Other	Direct burial	F	12	48	Z1C	3	20	UL/CSA
	Custom	O	Custom	Custom	Open	Custom	20	Not listed

<sup>1</sup> Please contact factory for information.

## Cable configurator (Chart 3)

Cable	# Conductors	Suffix	Designation	Voltage rating	Sheath	Max output air	Max output concrete	Max. temp. limit degrees °F	Max. amp./Heater
Bare copper	1	C	1C	600	Cooper	22	30	392	40
Bare copper	2	C	2C	300	Cooper	22	30	392	24
Jacketed copper	1	R	Z1C	600	LSZH copper	8	30	194	40
Jacketed copper	2	R	Z2C	300	LSZH copper	8	30	194	24
Alloy 825	1	SS	S1C	600	825	58	58	1100	40
Alloy 825	2	SS	S2C	600	825	58	58	1100	24

NOTE: HDPE has been replaced with LSZH (Low Smoke Zero Halogen) covering.

## Cable assemblies (Chart 4)

1 Conductor CU-LSZH	Ohms/ft.	0.610	0.390	0.300	0.200	0.150	0.105	0.080	0.060	0.040	0.030	0.020	0.010	-	-	-	-	-	-
	Voltage Rating	600	600	600	600	600	600	600	600	600	600	600	600	-	-	-	-	-	-
2 Conductor CU-LSZH <sup>1</sup>	Ohms/ft.	0.800	0.600	0.400	0.300	0.200	0.125	0.100	0.070	0.044	0.028	-	-	-	-	-	-	-	-
	Voltage Rating	300	300	300	300	300	300	600	600	600	600	-	-	-	-	-	-	-	-
1 Conductor Alloy 825	Ohms/ft.	2.0	1.60	1.30	1.00	0.850	0.700	0.500	0.280	0.200	0.150	0.118	0.0732	0.0581	0.0467	0.0366	0.0290	0.0231	0.0183
	Voltage Rating	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
2 Conductor Alloy 825	Ohms/ft.	11.00	9.00	6.00	4.14	2.00	1.15	0.700	0.505	0.286	0.200	0.150	0.100	0.0775	0.0561	0.0402	0.0281	0.0200	-
	Voltage Rating	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	-

<sup>1</sup> Some 2-conductor M.I. heating cable assemblies are limited to 277VAC.





MI

**Mineral Insulated (M.I.) Cable Assembly**  
One and Two Conductor



## M.I. Mineral Insulated Alloy 825

### Heat trace cable

#### One and Two Conductor

Delta-Therm seamless Alloy 825 sheath was developed to meet the demands of corrosive environments and high temperature applications. Delta-Therm uses only seamless Alloy 825 sheathing to avoid the potential problems associated with seam-welded tube.

Alloy 825 is resistant to reducing environments, stress corrosion and oxidizing environments. The relatively high nickel content of alloy 825, plus molybdenum and copper, makes it considerably more resistant to reducing environments (such as sulfuric or phosphoric acids) than most of the common stainless steels. It also effects a high resistance to stress corrosion cracking in chloride or alkaline environments. The chromium content, in combination with the nickel, makes the alloy resistant to a variety of oxidizing environments such as nitric acid solutions, nitrates and oxidizing salts.

Alloy 825 can be used at temperatures up to 1100 °F (800 °C) in normal atmospheres.

### Alloy 825 limiting chemical composition, % by WT:

Nickel	38 - 46
Carbon	0.05 max.
Manganese	1.0 max.
Iron	Balance
Sulfur	0.03 max.
Silicon	0.5 max.
Copper	1.5 - 3.0
Chromium	19.5 - 23.5
Aluminum	0.2 max.
Titanium	0.6 - 1.2
Molybdenum	2.5 - 3.5

### Alloy 825 heat trace cable quick reference guide<sup>1</sup>

Alloy	Description	
INCOLOY Alloy 825	Excellent resistance to wide variety of corrosives.	
Nickel - Iron - Chromium	Resists pitting and intergranular type corrosion, reducing acids and oxidizing chemicals.	

Nominal chemical composition % (major element)				Oxidation	Carburi- zation	Corrosion resistance								A = Acceptable	X = Check for specific data	
Nickel (+Cobalt)	Iron	Chromium	Other			G-E = Good to excellent	NR = Not recommended	Sulfuric Acid	Hydrochloric Acid	Hydro- fluoric	Phosphoric Acid	Nitric Acid	Organic Acid	Alkalis	Salts	Seawater
42	30	21.5	Mo 3.0 Cu 2.2	G-E	G-E	G-E	G-E	G-E	G-E	G-E	G-E	G-E	G-E	G-E	G-E	G-E

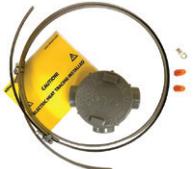
<sup>1</sup> Excerpt from Huntington Alloys Publication 78-348-2.



Product #	Description
	<b>ELVB-SRAM-34-ST</b>  Power connection with steel/zinc cable gland/fitting, 3/4" NPT non-hazardous location
	<b>EL-ECM</b>  End termination
	<b>KIT-OSR-ELSR-MA</b>  End and power termination kit with warning sticker

Product #	Description
 <b>ELVB-SRAM-34-ST</b>	Power connection with steel/zinc cable gland/fitting, 3/4" NPT non-hazardous location
 <b>EL-ECMF</b>	End termination
 <b>KIT-OSR-ELSR-MA-BF</b>	End and power termination kit with warning sticker
 <b>KIT-OSR-ECA-MABF -PH-FIT</b>	Brass gland cable fitting 3/4" NPT
 <b>KIT-OSR-MABF-PH-112-CTSOD</b>	Quick connect plumbing kit for 1 1/2" OD polyethylene CTS pipes
 <b>KIT-OSR-MABF-PH-114-CTSOD</b>	Quick connect plumbing kit for 1 1/4" OD polyethylene CTS pipes
 <b>KIT-OSR-MABF-PH-1-CTSOD</b>	Quick connect plumbing kit for 1" OD polyethylene CTS pipes
 <b>KIT-OSR-MABF-PH-112-ID</b>	Quick connect plumbing kit for 1 1/2" ID polyethylene pipes
 <b>KIT-OSR-MABF-PH-114-ID</b>	Quick connect plumbing kit for 1 1/4" ID polyethylene pipes
 <b>KIT-OSR-MABF-PH-1-ID</b>	Quick connect plumbing kit for 1" ID polyethylene pipes
 <b>KIT-OSR-MABF-PH-34-ID</b>	Quick connect plumbing kit for 3/4" ID polyethylene pipes

Product #	Description
 <b>ELVB-SRAN</b>	Power connection without cable gland
 <b>ELVB-SRAN-12-PA</b>	Power connection with plastic/PA12 cable gland/fitting, 1/2" NPT non-hazardous location
 <b>ELVB-SRAN-34-PA</b>	Power connection with plastic/PA12 cable gland/fitting, 3/4" NPT non-hazardous location
 <b>ELVB-SRAN-34-ST</b>	Power connection with steel/zinc cable gland/fitting, 3/4" NPT non-hazardous location
 <b>ELVB-SREX-34-HT</b>	Power connection with nickel plated cable gland 3/4" NPT hazardous location
 <b>EL-ECN-EX</b>	End termination
 <b>KIT-OSR-ELSR-NA</b>	End and power termination kit with warning sticker
 <b>EL-SPN-16</b>	Heat shrink splice kit suitable for ELSR-NA and cold lead connections

Product #	Description
	<b>ECA-JB1</b> Junction box for single connection c/w label and fastener
	<b>ECA-JB2</b> Junction box for double connection c/w label and fastener
	<b>ELAK-EX-3</b> Junction box with pipe mounting stand for non-hazardous (ordinary) and hazardous locations
	<b>ELAK-5-7</b> Junction box wall mount in antistatic polyamide (PA) for connection up to two cables
	<b>EL-CLIC-S</b> Quick connector for direct connection or cold lead connections of 1 to 3 cables
	<b>EL-CLIC-P</b> Quick connector with supply lead, for 1 to 3 cables

## Accessories

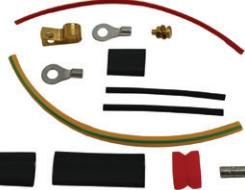
### PSB Cables

Product #		Description
	TWISTO-N-B-PK	Power connection kit with 5' (1.5 m) power cable and end seal
	TWISTO-N-B-S	Splice kit for connecting two heating cables
	TWISTO-N-B-T	T-junction kit for 3 heating cables
	TWISTO-N-B-PS	Heating cable powered splice kit with 5' (1.5 m) power cable
	TWISTO-N-B-PT	T-junction powered kit for 3 heating cables with 5' (1.5 m) power cable
	TWISTO-N-B-X	Splice kit X-Branch for 4 heating cables
	TWISTO-N-B-P	Heating cable powered connection kit with 5' (1.5 m) power cable without end seal
	IEB-P	Insulation entry bushing



## Accessories

### BPL Cables

	Product #	Description
	PBS-220-A	High profile single entry power connection kit with stand and junction box on pipe with 10 AWG terminals
	ELL-220-A	High profile end seal kit on pipe with red light
	CAK-AH-A	Cold applied kit for off pipe M20
	HAK-AH-A	Heat shrink kit for on pipe stand
	BPL-BP	Thermo barrier pad
	BPL-BRACKET	Mounting brackets, qty 220

## Accessories

### PSB / MSB / HSB Cables

	Product #	Description
	PBS-200-A	High profile single entry power connection kit for PSB/MSB/HSB cable with stand and junction box on pipe with 10 AWG terminals <i>For complete kit contents and approvals please see data sheets available on our website</i>
	PBS-200-A10	High profile single entry power connection kit for PSB/MSB/HSB cable with stand and junction box on pipe with 6 AWG terminals <i>For complete kit contents and approvals please see data sheets available on our website</i>
	PBS-300-A	High profile single entry power connection kit for PSB/MSB/HSB cable with stand and junction box off pipe with 10 AWG terminals <i>For complete kit contents and approvals please see data sheets available on our website</i>
	PBM-200-A	High profile multiple entry power connection kit for PSB/MSB/HSB cable with stand and junction box on pipe with 8 AWG terminals <i>For complete kit contents and approvals please see data sheets available on our website</i>
	PBM-300-A	High profile multiple entry power connection kit for PSB/MSB/HSB cable with stand and junction box off pipe with 10 AWG terminals <i>For complete kit contents and approvals please see data sheets available on our website</i>
	CAK-SRP-PA	Connection kit for ordinary locations NPT 1/2 poly gland for PSB Cable
	CAK-SRM-HA	Connection kit for ordinary locations NPT 1/2 metal gland for MSB/HSB cable
	PBS-SPA	Small pipe adapter for power connection with PBS kits
	PBM-SPA	Small pipe adapter for power connection with PBM kits

Product #		Description
	ELL-200-A	<p>High profile end seal kit for PSB/MSB/HSB cable on pipe with red light  <i>For complete kit contents and approvals please see data sheets available on our website</i></p>
	ELL-300-A	<p>High profile end seal kit for PSB/MSB/HSB cable off pipe with red light  <i>For complete kit contents and approvals please see data sheets available on our website</i></p>
	ELS-200	<p>High profile end seal kit for PSB/MSB/HSB cable on pipe with weather head  <i>For complete kit contents and approvals please see data sheets available on our website</i></p>
	CAK-E5-A	<p>Silicone end seal kits for PSB/MSB/HSB cable with 1x RTV (pkg of 5)</p>
	CAK-E10-A	<p>Silicone end seal kits for PSB/MSB/HSB cable with 2x RTV (pkg of 10)</p>
	CAK-D5-A	<p>Cold applied kit on pipe stand for PSB/MSB/HSB cable  <i>For complete kit contents and approvals please see data sheets available on our website</i></p>
	CAK-PH-A	<p>Cold applied kit off pipe M20 for PSB/MSB/HSB cable</p>

Product #		Description
	IEB-H	Insulation entry bushing for HSB/MSB cable
	IEB-PT	Insulation entry bushing for Pt100 Ex sensor (M25)
	EHT-CKT-TAG	Heat tracing phenolic circuit tags for PSB/MSB/HSB cable
	EHT-TAG	Heat tracing stainless steel circuit tags for PSB/MSB/HSB cable
	TW-05	Stainless steel tie wire 1100' for PSB/MSB/HSB cable

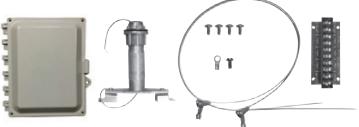
## Accessories

### PT / PF Cables

Product #	Description
	<b>KIT-PCK-PT/PF</b>  Power and end termination kit for ordinary and hazardous locations Class I, Division II, Group B, C and D <i>(For installation details please refer to instruction manual)</i>
	<b>KIT-SPK-PT/PF</b>  Splice connection kits, for under insulation splicing applications with maximum exposure temperature of 200 °F (93 °C). Minimum ambient temperature install is -5 °F (-20 °C) Requires electrical tape not supplied with kit <i>(For installation details please refer to instruction manual)</i>
	<b>KIT-ETK-PT/PF</b>  End termination kit Material for one end termination <i>(For installation details please refer to instruction manual)</i>
	<b>KIT-PT-T3SL</b>  3-way tee splice kit for splicing in appropriately rated junction box (not supplied with kit) <i>(For installation details please refer to instruction manual)</i>

## Accessories

### PT / PF Cables

Product #	Description
	KIT-PC1 Polycarbonate enclosure for on pipe installation compatible with KIT-PCK-PT/PF Suitable for wet locations
	KIT-PC2 Polycarbonate enclosure for on pipe installation compatible with KIT-SPK-PT/PF and KIT-ETK-PT/PF Suitable for wet locations
	KIT-PC3 Polycarbonate 8"x6"x4" lockable NEMA 4X enclosure for 3-way splicing ordinary locations
	KIT-PC3-TB Polycarbonate 8"x6"x4" lockable NEMA 4X enclosure for power connection, splicing or 3-way splicing ordinary locations c/w terminal block
	KIT-PC3-LED Polycarbonate 8"x6"x4" lockable NEMA 4X enclosure c/w LED monitor power on indication light, ordinary locations
	KIT-PC3-TB-LED Polycarbonate 8"x6"x4" lockable NEMA 4X enclosure c/w LED monitor power on indication light and terminal block, ordinary locations



**Accessories**  
Roof / Gutter Cables

	Product #	Description
	<b>ELB-RCLIP</b>	Roof clips for cable, qty 25
	<b>KIT-ELB-20</b>	Stainless steel downspout 90° mounting plate with nylon ties
	<b>KIT-ELB-21</b>	Stainless steel gutter mounting plate with nylon ties
	<b>KIT-DSR-DRD</b>	DSR series kit, roof drain de-icing bracket kit
	<b>KIT-DSH-CU</b>	Downspout hanger copper kit with nylon ties
	<b>RM-25-AL<sup>1</sup></b>	Three prong aluminum clips for metal roof
	<b>RM-25-CU<sup>2</sup></b>	Three prong copper clips for copper roof
	<b>SB-190<sup>3</sup></b>	10 oz tube of everset adhesive for roof clips
	<b>PAD-VHB</b>	Package of 25, 2" x 3" adhesive pads for RM-25-AL clips

<sup>1</sup> requires PAD-VHB

<sup>2</sup> Product is soldered to roof

<sup>3</sup> Cannot be used with copper clips or on copper roofing



**Accessories**  
**Pipe Tracing Cables**

Product #	Description
	<b>T-AL200</b> 2" x 150' aluminium foil adhesive tape
	<b>T-AL400</b> 4" x 150' aluminium foil adhesive tape
	<b>T-F50</b> 1/2" x 180' fiberglass tape, rated 311 °F
	<b>T-F50H</b> 1/2" x 108' fiberglass tape, rated 356 °F
	<b>T-F75</b> 3/4" x 180' fiberglass tape, rated 311 °F
	<b>DT-CL-L</b> Caution label – Large 9" x 2" yellow
	<b>DT-CL-S</b> Caution label – Small 4" x 1.5" yellow
	<b>DT-PS1-4</b> Pipe strap, 1" to 4" pipe stainless steel
	<b>DT-PS3-8</b> Pipe strap, 3" to 8" pipe stainless steel
	<b>DT-PS8-20</b> Pipe strap, 8" to 20" pipe stainless steel



## Controls

### Floor Warming

Product #	Description
	<b>OTH3600-GA<sup>2,3</sup></b> Non programmable electronic thermostat for floor heating system 15 Amp., 120/208/240V, Class A, GFCI mA <sup>1</sup>  <i>Compliance with standard</i> CAN/CSA-C828-13
	<b>OTH3600P-GA<sup>2,3</sup></b> Programmable electronic thermostat for floor heating system 15 Amp., 120/208/240V, Class A, GFCI mA <sup>1</sup>  <i>Compliance with standard</i> CAN/CSA-C828-13
	<b>OTH3600-GA-ZB<sup>2,3</sup></b> Smart thermostat - Zigbee for floor heating system 15 Amp., 120/208/240V, Class A, GFCI mA <sup>1</sup>   <i>CSA-C828-13 Performance Standard</i> 
	<b>TH1310WF<sup>2,3</sup></b> Smart thermostat – Wi-Fi for floor heating system 15 Amp., 120/208/240V, Class A, GFCI mA <sup>1</sup>   <i>CSA-C828-13 Performance Standard</i>     
	<b>TR1310-120-240GA<sup>3</sup></b> Slave unit for floor heating system 15 Amp., 120/208/240V, Class A, GFCI mA <sup>1</sup>
	Smart gateway that provides remote access to the OTH3600-GA-ZB  

<sup>1</sup> GFCI: Ground fault circuit interrupter.

<sup>2</sup> 15' (4.6 m) floor sensor included.

<sup>3</sup> Standard color is white.

<sup>4</sup> Standard color is black.

Use of the Works with Apple badge means that an accessory has been designed to work specifically with the technology identified in the badge and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. HomeKit is a trademark of Apple Inc. Neviweb® is a registered trademark of Sinopé Technologies Inc. in Canada and the United States. Apple and the Apple logo are trademarks of Apple Inc, registered in the U.S. and other countries. App Store is a service mark of Apple Inc., registered in the U.S. and other countries. Google Play and the Google Play logo are trademarks of Google Inc. The Wi-Fi CERTIFIED™ Logo is a certification mark of Wi-Fi Alliance®.



	Product #	Description
	ETO2	<p>Fully automatic and economical dual-zone electronic controller, suitable for controlling electric heating cables in one or two zones, 1-zone: 3 x 16A, 2-zone: 2 x 16A, 120V to 240V</p>
		Suitable for use with GFEP panels
	ETO2-BOX	Mounting box dual-zone electronic controller ETO2
	ETO-G	Ground sensor to detect humidity and temperature with 33' (10 m) side entry cable
	ETO-G-56	Ground sensor to detect humidity and temperature with 80' (25 m) bottom entry cable
	ETOK-1	Mounting tube for ground sensor ETOG-56
	ETOR-55	Gutter sensor to detect humidity with 33' (10 m) cable
	ETF-744-99	24V outdoor sensor for measuring temperature



## Controls

### Snow Melting / Roof De-icing

	Product #	Description
	DS-2C	Aerial mounted controller with sensor to detect humidity and temperature, 30A: 100V to 277V, 20A: 28VDC
	DS-5C	Aerial mounted controller with sensor to detect humidity and temperature, 2X 30A, 100V to 277V
	DS-8C	Aerial mounted controller with sensor to detect temperature and a sensor to detect humidity with 10' (3 m) cable, 30A, 100V to 277V
	DS-9C	Aerial mounted controller with sensor to detect temperature and a sensor to detect humidity with 10' (3 m) cable, 2 X 30A, 100V to 277V
	EX-50	50' (15 m) extension kit, with connection fittings for humidity sensor
	CDP-2	Interior controller and display for DS controllers



Product #	Description
	<b>APS-3C-120V</b> Automatic snow and ice melting control system 120V, 24A
	<b>APS-3C-208-240V</b> Automatic snow and ice melting control system 208-240V, 24A
	<b>APS-4C-208-240V</b> Automatic snow and ice melting control system 208-240V, 50A c/w built-in adjustable 30 mA GFEP
	<b>APS-4C-277V</b> Automatic snow and ice melting control system 277V, 50A c/w built-in adjustable 30 mA GFEP
	<b>APS-4C-277-480V</b> Automatic snow and ice melting control system 277-480V 3-phase, 50A c/w built-in adjustable 30 mA GFEP
	<b>EUR-5A</b> 24V controller for snow and ice melting system c/w RCU-3 remote control unit
	<b>GF-PRO</b> NEMA 4X dual sensor capability controller for snow and ice melting system 100-277V, 30A c/w built-in 30 mA GFEP



**Controls**

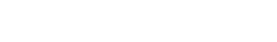
Snow Melting / Roof De-icing



Product #	Description	
	<b>LCD-8-100-240V</b>	Configurable aerial mounted snow and ice melting system controller
	<b>PD-PRO</b>	NEMA 3R dual sensor capability controller for snow and ice melting system 100-277V, 30A
	<b>RCU-3</b>	Remote control unit for APS-3C, PD-PRO and EUR-5A
	<b>RCU-4</b>	Remote control unit for APS-4C, SC-40C and GF-PRO
	<b>SC-40C-208-240V</b>	Satellite contactor for modular snow and ice melting control system 208-240V, 50A c/w built-in adjustable 30 mA GFEP
	<b>SC-40C-277V</b>	Satellite contactor for modular snow and ice melting control system 277V, 40A c/w built-in adjustable 30 mA GFEP
	<b>SC-40C-277-480V</b>	Satellite contactor for modular snow and ice melting control system 277-480V 3-phase, 50A c/w built-in adjustable 30 mA GFEP
	<b>SNOW-OWL</b>	Aerial mounted snow sensor 24V



	<b>Product #</b>	<b>Description</b>
	<b>GIT-1</b>	Gutter and downspout de-icing sensor to detect humidity and temperature compatible with GF-PRO and PD-PRO controllers
	<b>SIT-6E</b>	Ground sensor to detect humidity and temperature for APS control panel (requires 23832-HOUSING)
	<b>23832-HOUSING</b>	Ground sensor housing for HSC-24 and SIT-6E
	<b>25076-THERMISTOR</b>	High temperature sensor 100k ohms c/w 20' (6 m) cable (No disc.)

Product #	Description
	<b>A19QSC-1C</b>  Freeze protection NEMA 4X ambient or line sensing thermostat temperature control 120-277V, 22A, SPST c/w with 10' (3 m) capillary
	<b>A421ABC-02C</b>  NEMA 1 adjustable electronic temperature control 120V 15A, 208V 10A or 240V 10A, SPDT c/w A99BB-200C PTC sensor with 6.5' (2 m) lead  Range -40 °C to 100 °C (-40 °F to 212 °F)
	<b>A421AEC-02C</b>  NEMA 4X adjustable electronic temperature control 120V 15A, 208V 10A or 240V 10A, SPDT c/w A99BB-200C PTC sensor with 6.5' (2 m) lead  Range -40 °C to 100 °C (-40 °F to 212 °F)
	<b>A99BC-1500C</b>  49' (15 m) thermistor lead
	<b>A99BB-600C</b>  19.7' (6 m) thermistor lead

Product #	Description
	<b>ELTC-14-RTD</b>  Digital temperature control 20A at 90-260V, including 3-wire RTD (Pt-100) sensing element is 5 x 50 mm with 5 m of fluoropolymer lead wires, range 0 °C to 250 °C (32 °F to 482 °F)  Suitable for used with GFEP panels

Product #	Description														
	<p><b>E100-13545</b></p> <p>Nema 4X epoxy painted die cast aluminum line sensing thermostat 120-480V, 22A, SPDT c/w 10' (3 m) stainless steel capillary Range -3.8 °C to 162.7 °C (25 °F to 325 °F)</p>														
	<p><b>B100-13546</b></p> <p>Nema 4X epoxy painted die cast aluminum ambient sensing thermostat 120-480V, 22A, SPDT c/w stainless steel stem sensor Range -40 °C to 71 °C (-40 °F to 160 °F)</p>														
	<p><b>E121-13273</b></p> <p>Explosion -proof NEMA 4X 7, 9 and IP66 epoxy painted die cast aluminum line sensing thermostat temperature control 120-480V, 22A, SPDT c/w 10 ft. (3 m) stainless steel capillary Range -3.8 °C to 162.7 °C (25 °F to 325 °F)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="background-color: #0070C0; color: white; padding: 2px;">Approvals</th></tr> <tr> <td style="padding: 2px;">UL</td><td style="padding: 2px;">CSA / FM</td></tr> <tr> <td style="padding: 2px;">Class I, Division 1 &amp; 2</td><td style="padding: 2px;">Class I, Division 1 &amp; 2</td></tr> <tr> <td style="padding: 2px;">Grps. B, C &amp; D</td><td style="padding: 2px;">Grps. B, C &amp; D</td></tr> <tr> <td style="padding: 2px;">Class II, Division 1 &amp; 2</td><td style="padding: 2px;">Class II, Division 1 &amp; 2</td></tr> <tr> <td style="padding: 2px;">Grps. #, F &amp; G</td><td style="padding: 2px;">Grps. E, F &amp; G</td></tr> <tr> <td colspan="2" style="padding: 2px;">Class III, Division 1 &amp; 2</td></tr> </table>	Approvals		UL	CSA / FM	Class I, Division 1 & 2	Class I, Division 1 & 2	Grps. B, C & D	Grps. B, C & D	Class II, Division 1 & 2	Class II, Division 1 & 2	Grps. #, F & G	Grps. E, F & G	Class III, Division 1 & 2	
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Class III, Division 1 & 2															
	<p><b>B121-13272</b></p> <p>Explosion -proof NEMA 4X 7, 9 and IP66 epoxy painted die cast aluminum ambient sensing thermostat temperature control 120-480V, 22A, SPDT c/w stainless steel stem Range -9 °C to -60 °C (15 °F to 140 °F)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="background-color: #0070C0; color: white; padding: 2px;">Approvals</th></tr> <tr> <td style="padding: 2px;">UL</td><td style="padding: 2px;">CSA / FM</td></tr> <tr> <td style="padding: 2px;">Class I, Division 1 &amp; 2</td><td style="padding: 2px;">Class I, Div. 1 &amp; 2</td></tr> <tr> <td style="padding: 2px;">Grps. B, C &amp; D</td><td style="padding: 2px;">Grps. B, C &amp; D</td></tr> <tr> <td style="padding: 2px;">Class II, Division 1 &amp; 2</td><td style="padding: 2px;">Class II, Div. 1 &amp; 2</td></tr> <tr> <td style="padding: 2px;">Grps. #, F &amp; G</td><td style="padding: 2px;">Grps. E, F &amp; G</td></tr> <tr> <td colspan="2" style="padding: 2px;">Class III, Div. 1 &amp; 2</td></tr> </table>	Approvals		UL	CSA / FM	Class I, Division 1 & 2	Class I, Div. 1 & 2	Grps. B, C & D	Grps. B, C & D	Class II, Division 1 & 2	Class II, Div. 1 & 2	Grps. #, F & G	Grps. E, F & G	Class III, Div. 1 & 2	
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Class III, Div. 1 & 2															
	<p><b>ECA-E55-R25HT</b></p> <p>SPDT, NEMA 4X thermostat in molded aluminum housing, 22A at 120/250/480V, with 10 ft. (3 m) stainless steel bulb and capillary Requires a ground fault circuit interrupter (GFCI) in the electrical panel</p>														

Product #	Description
	<b>S1-A</b> NEMA 4X IP67 electronic single point line sensing heat trace controller 100-277V, 30A c/w built-in 30 mA GFEP and 20' (6 m) lead, 10k ohms thermistor, Wi-Fi, Ethernet, Modbus and BACnet <sup>1</sup> capabilities
	<b>S1-B</b> NEMA 4X IP67 electronic single point line sensing heat trace controller 100-277V, 30A c/w built-in 30 mA GFEP and 20' (6 m) lead, 10k ohms thermistor, Wi-Fi, Ethernet capabilities
	<b>GATEWAY-PCKG</b> 24VDC BACnet gateway assembly with power supply NEMA 4X enclosure with 24VDC transformer for S1 Series
	<b>GATEWAY</b> 24VDC BACnet gateway stand alone for S1 Series

<sup>1</sup> BACnet IP or MS/TP available via preconfigured SMC gateway, sold separately.

Product #	Description
	<b>FPT-130</b> NEMA 4X IP66 mechanical single point line sensing heat trace controller 100-277V, 30A c/w built-in 30 mA GFEP and 20' (6 m) lead, 100k ohms at 25 °C (77 °F) thermistor  Range -40 °C to 110 °C (-40 °F to 230 °F)
	<b>GPT-130</b> NEMA 4X IP66 electronic single point line sensing heat trace controller 100-277V, 30A c/w built-in 30 mA GFEP and 20' (6 m) lead, 100k ohms at 25 °C (77 °F) thermistor  Range -40 °C to 110 °C (-40 °F to 230 °F)
	<b>GPT-230</b> NEMA 4X IP66 electronic dual point line sensing heat trace controller 100-277V, 2X 30A c/w built-in 30 mA GFEP and 2X 20' (6 m) lead, 100k ohms at 25 °C (77 °F) thermistor  Range -40 °F to 110 °C (-40 °C to 230 °F)

**TraceMate™**


Advanced NEMA 4X steel, powder coat painted electronic controller. Designed for indoor or outdoor use in non-hazardous and hazardous areas c/w built-in GFEP.

CSA C US

Class I, Division 2, Groups A, B, C, D

Class I, Zone II, Groups IIC

Temperature range -50 °C to 500 °C (-58 °F to 932 °F)

Operating range -40 °C to 50 °C (-40 °F to 122 °F)

LCD Display operating range -20 °C to 50 °C (-4 °F to 122 °F)

Product #	Description
TM-1SIH1-E5-RTD-A1	TraceMate™ I GFCI electronic thermostat for single circuit at 120V, 30A
TM-1DIH2-E5-RTD-A1	TraceMate™ I GFCI electronic thermostat for single circuit at 240/208V, 30A
TM-1SIH1-E5-RTD-A1-277	TraceMate™ I GFCI electronic thermostat for single circuit at 277V, 30A
TM-2SIH1-E5-RTD	TraceMate™ II GFCI electronic thermostat for dual circuit at 120V, 2 x 30A
TM-2SIH1-E5-RTD-277	TraceMate™ II GFCI electronic thermostat for dual circuit at 277V, 2 x 30A
TM-2DIH2-E5-RTD-208-240	TraceMate™ II GFCI electronic thermostat for dual circuit at 240/208V, 2 x 30A

**MasterTrace<sup>1</sup>**


Advanced NEMA 4X steel, powder coat painted electronic controller. Designed for use in non-hazardous and hazardous areas c/w built-in GFEP, RS485 type with Modbus © RTU protocol, comes with a 9 tactile keys, polyester faceplate and LCD display.

CSA C US

Class I, Division 2, Groups A, B, C, D

Class I, Zone II, Groups IIC

Class II, Division 2, Groups F & G

Class III

Temperature range -50 °C to 500 °C (-58 °F to 932 °F)

Operating range -40 °C to 50 °C (-40 °F to 122 °F)

Product #	Description
MS-2101	MasterTrace single circuit electronic GFCI controller with double pole, 85V to 300V, 30A, with user interface
MS-2101-E3	MasterTrace single circuit electronic GFCI controller with double pole, 85V to 300V, 30A, with user interface, stainless steel housing
MS-2102	MasterTrace double circuit electronic GFCI controller with single pole, 120V or 277V, 2 x 30A, with user interface
MS-2102-E3	MasterTrace double circuit electronic GFCI controller with single pole, 120V or 277V, 2 x 30A, with user interface, stainless steel housing
RTD-7	RTD probe for MasterTrace controller

<sup>1</sup> Multi-circuit custom MasterTrace control panels are available upon request.



Picture of DT-4P40A-24 shown as example.

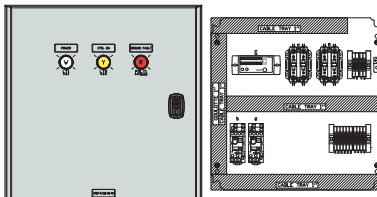
**DT-XP40A Enclosed Contactor Panels**

Contactor panels with NEMA 1 enclosure:

- Contactor rating 40FLA (50A resistive), 600V max.
- Contactor coil voltage 120V

Product #	Description
<b>DT-4P40A</b>	Enclosed contactor panel 4 circuits 120/277V (2 circuits 208/240/480V), NEMA 1, 1 x 4 poles 50A resistive contactor, control sold separately
<b>DT-8P40A</b>	Enclosed contactor panel 8 circuits 120/277V (4 circuits 208/240/480V), NEMA 1, 2 x 4 poles 50A resistive Contactor, control sold separately
<b>DT-12P40A</b>	Enclosed contactor panel 12 circuits 120/277V (6 circuits 208/240/480V), NEMA 1, 3 x 4 poles 50A resistive contactor, control sold separately
<b>DT-16P40A</b>	Enclosed contactor panel 16 circuits 120/277V (8 circuits 208/240/480V), NEMA 1, 4 x 4 poles 50A resistive contactor, control sold separately
<b>DT-4P40A-24</b>	Enclosed contactor panel 4 circuits 120/277V (2 circuits 208/240/480V), NEMA 1, 1 x 4 poles 50A resistive contactor c/w 24V control transformer, control sold separately
<b>DT-8P40A-24</b>	Enclosed contactor panel 8 circuits 120/277V (4 circuits 208/240/480V), NEMA 1, 2 x 4 poles 50A resistive contactor c/w 24V control transformer, control sold separately
<b>DT-12P40A-24</b>	Enclosed contactor panel 12 circuits 120/277V (6 circuits 208/240/480V), NEMA 1, 3 x 4 poles 50A resistive contactor c/w 24V control transformer, control sold separately
<b>DT-16P40A-24</b>	Enclosed contactor panel 16 circuits 120/277V (8 circuits 208/240/480V), NEMA 1, 4 x 4 poles 50A resistive contactor c/w 24V Control transformer, control sold separately

Standard color is grey.


**GFEP Panels**

NEMA 4X (Painted steel) relay control panels c/w a built-in GFPE that can be used for snow melting, de-icing, or heat tracing applications.

Three light indicators mounted on the panel: Power On (White), Control on (Yellow) and Alarm (Red).

We recommend using for snow melting and de-icing applications the ETO2 controller or for heat tracing the ELTC-14-RTD controller, both are sold separately.

Product #	Description
<b>GFEP-2-120-30-4X</b>	120V Ground fault panel two 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-2-208-30-4X</b>	208V Ground fault panel two 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-2-240-30-4X</b>	240V Ground fault panel two 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-2-277-30-4X</b>	277V Ground fault panel two 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-2-480-30-4X</b>	480V Ground fault panel two 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-4-120-30-4X</b>	120V Ground fault panel four 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-4-208-30-4X</b>	208V Ground fault panel four 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-4-240-30-4X</b>	240V Ground fault panel four 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-4-277-30-4X</b>	277V Ground fault panel four 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-4-480-30-4X</b>	480V Ground fault panel four 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-6-120-30-4X</b>	120V Ground fault panel six 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-6-208-30-4X</b>	208V Ground fault panel six 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-6-240-30-4X</b>	240V Ground fault panel six 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-6-277-30-4X</b>	277V Ground fault panel six 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-6-480-30-4X</b>	480V Ground fault panel six 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-8-120-30-4X</b>	120V Ground fault panel eight 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-8-208-30-4X</b>	208V Ground fault panel eight 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-8-240-30-4X</b>	240V Ground fault panel eight 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-8-277-30-4X</b>	277V Ground fault panel eight 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-8-480-30-4X</b>	480V Ground fault panel eight 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-12-120-30-4X</b>	120V Ground fault panel twelve 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-12-208-30-4X</b>	208V Ground fault panel twelve 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-12-240-30-4X</b>	240V Ground fault panel twelve 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-12-277-30-4X</b>	277V Ground fault panel twelve 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>GFEP-12-480-30-4X</b>	480V Ground fault panel twelve 30A circuit relay NEMA 4X (Painted steel) controller sold separately
<b>Option<sup>1</sup></b>	
<b>-SS</b>	Stainless steel panel option available on order, please contact the factory for lead time

<sup>1</sup> Custom panels are available on request, please contact factory.

### TERMS

Net 30 upon credit approval.

### MINIMUM ORDER

No minimum. All new customers will prepay between 50% - 100% of initial order, pending credit reference check.

### FREIGHT POLICY

- Freight will be charged on orders of \$9,000.00 list or less.
- Full freight allowed on orders over \$9,000.00 list for domestic ground delivery only.
- Delivery determined when order is placed. For same day shipping, orders must be submitted by 2pm CST.
- Orders ship from Crystal Lake, IL.
- Add \$7.50 S+H for all freight orders.
- Ground shipments to Alaska and Hawaii will be freight allowed providing the order has a List Price value of \$13,000 or greater.

### HOLD FOR RELEASE ORDERS

- Orders may be entered for "Hold for Release" for a maximum of 90 days.
- After the initial 90 days, orders will be re-entered based on current price.
- Delta-Therm reserves the right to cancel any order after 90 days.

### FIELD-TERMINATED CABLE

- Field terminated self-regulating and constant watt cables are cut to length at no charge.
- Delta-Therm reserves the right to ship +/- 5% of actual cable ordered.
- Delta-Therm will bill for actual cable shipped.
- Shipping weights shown in price list are approximate.

### RETURN MERCHANDISE POLICY

- RMA NUMBERS ARE VALID FOR 30 DAYS FROM DATE OF ISSUE.
- All product returns must be accompanied by a Return Materials Authorization (RMA) number which can be obtained by calling our customer service. Items must be returned within 90 days of original invoice date.
- To obtain an RMA number you must furnish the original Delta-Therm invoice number at time of request.
- The RMA number must be clearly marked on each shipping container and attached documentation.
- For credit, all material must be in original packaging and in resellable condition.
- Heating cable must be on the original reel, uncut, and still maintain the factory tags.

### RESTOCKING FEES

- 75% on standard non-stock products and custom products.
- 20% on standard stock products (in original package).
- 75% on field terminated cables for lengths under 100 ft.
- 75% for custom designs (such as OEM products).

### GENERAL POLICIES

- Custom panels may not be returned.
- Special order minimum for non-stock cable: 1,000 ft.
- No anticipatory discounts allowed.
- No material returned without factory authorization in the form of an RMA number.
- Shipping weights shown in price list are approximate.

### SERVICES

ENGINEERING SERVICES. ... \$250.00 per hour.

FIELD SERVICES. ... \$250.00 per hour.

(4 hour minimum plus travel expenses)

- Cable testing and wiring inspection site visits.
- On site troubleshooting.
- Pre-installation on site planning meeting.
- Installation training.
- Repair services.
- GFPE Transformer Re-Tap Fee. ... \$130.00

### CAD DRAWING SERVICES

Drawing & Revision Time ... \$300.00 per hour

On request, a set of electronic drawings (PDF) including one revision can be supplied at no charge when requested with a purchase order. Charges apply for additional revisions. Submittal drawings can be ordered and credited at the time a purchase order is invoiced for a corresponding project. Charges are referenced above.

### ORDERING A DRAWING

PDF files are provided at no charge.

### DRAWING SET

The Delta-Therm CAD drawing set typically includes:

- Plan or elevations with product.
- Installation notes and bill of materials.
- General details.
- Control line diagrams.

### DRAWING REQUIREMENTS

- Submit the latest AutoCAD (.dwg format) plan or isometric. Files must be scalable.
- Electronic PDF's are accepted but must be scalable with at least one reference dimension.
- Scaled sketches are acceptable if all requirements have dimensions.



## PRODUCT TRAINING



## ENGINEERING SERVICES



## FIELD SERVICES



## SYSTEM WIRING INSPECTION AND TRAINING VISIT



## TECHNICAL SUPPORT



By:  
**INNOVAIR**  
SOLUTIONS

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