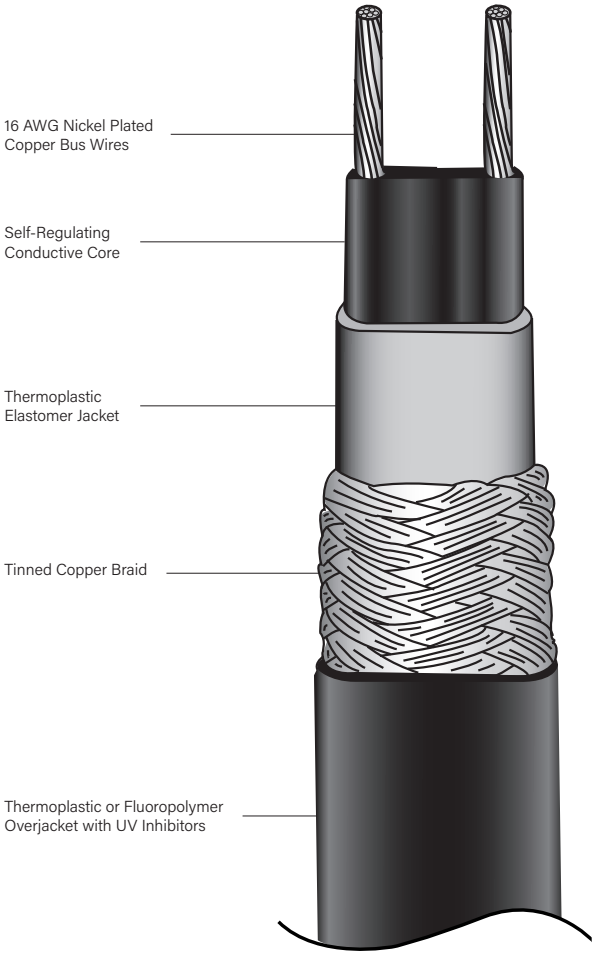
DELTA-THERM CORPORATION®

Industrial (IN) Series

Self-Regulating Cable for Roof and Gutter



120, 240 and 277 Volts 5 Watts/Ft.
208 Volts 8 Watts/Ft.
Above Standard Ratings are Heat Output at 50°F (10°C) for Roof and Gutter

DESCRIPTION

Delta-Therm self-regulating heating cable increases heat output as temperature decreases, and conversely, decreases heat output as temperature increases. This cable is intended for roof and gutter applications.

Industrial Series cables contain two parallel bus wires electrically connected by a web of PTC (positive temperature coefficient) conductive polymer. A thermoplastic elastomer jacket surrounds the cable to provide mechanical protection and electrical isolation. The tinned copper braid provides additional mechanical protection as well as a ground path for fault currents. The thermoplastic (T) or optional fluoropolymer (F) o erjacket has UV inhibitors which protect against damage from the sun. The overjacket also provides mechanical protection.

APPLICATION

Roof And Gutter Deicing

APPROVALS

CSA Wet: IN Series CBT or CBF cables are CSA certified for roof and gutter applications (2E Cable Designation) when used with PCK-RG connection kit.

WARNING: This cable must be installed by a qualified electrician. Improper installation can result in property damage, serious injury, and/or death due to electric shock and fires.

INSeries Technical Information

BREAKER SIZING AND MAXIMUM CIRCUIT LENGTH FT. (M)

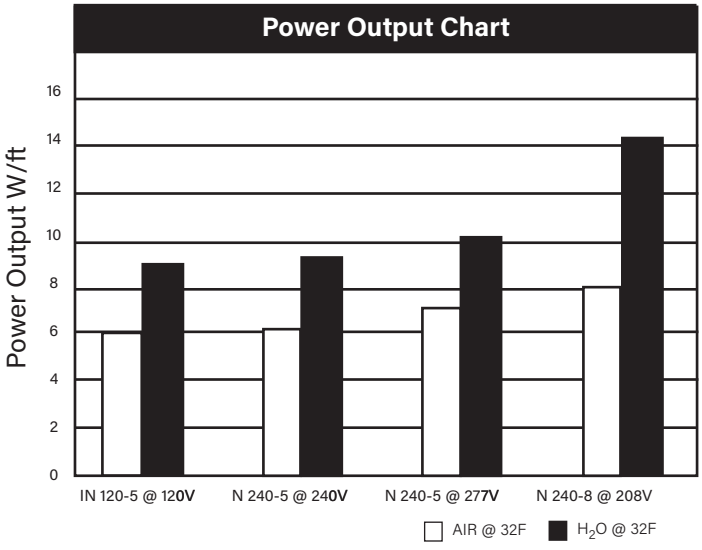
Protective Device Rating		15A	20A	30A
Volts	Catalog Number			
120	IN 120-5-CBT	125′ (38)	150′ (46)	205′ (62)
240	IN 240-5-CBT	250′ (76)	300′ (91)	335′ (102)
277	IN 240-5-CBT	160′ (49)	210′ (64)	320′ (98)
208	IN 240-8-CBT	190′ (58)	225′ (69)	260′ (79)

ALTERNATE 240 VAC VOLTAGES

Delta-Therm 240V self-regulating heating cable is multi-voltage. It can be used in 208V, 240V, and 277V applications. (Please refer to the thermal rating row on the Electric Specifications Table)

IN SERIES ELECTRICAL SPECIFICATIONS

Catalog Number	IN120-5	IN240-5	IN240-5	IN240-8
Voltage	120	240	277	208
Maximum Circuit Length Ft. (m)	205′ (62)	335′ (102)	320′ (98)	260′ (79)
Thermal Rating At 32°F (Watts/Ft.) Air 0°C (Watts/m) Air	6 (20)	6 (20)	7 (23)	8 (26)
Thermal Rating At 32°F (Watts/Ft.) H_2O - 0°C (Watts/m) H_2O	9 (30)	9 (30)	10 (33)	14 (46)
Maximum Exposure Temperature °F (°C)	185° (85°)	185° (85°)	185° (85°)	185° (85°)
Approvals	UL/CSA	UL/CSA	UL/CSA	CSA



ACCESSORIES

PCK-RG	Power Connection Kit
IMP	Ice Melt Panel
DT-AS-50	Roof Clips For Asphalt Or Metal Roofs (50 count)
RM-25-AL	Aluminum Clips For Metal Roofs (25 Count)
Specialty Clips	Specialty Clips for Roof Materials Other Than Metal or Asphalt
DSH	Down Spout Hanger

CONTROLS

DTC-24R	Roof Deicing Control
MPS	Roof Deicing Control

PANELS

DT-XXPXXX	Enclosed Contactor Panel
GFPE-X-X	Power Control Panel w/GFPE
LNR-X	Low Noise Relay Panel
Custom Control/Monitor/Alarm Panels	

CIRCUIT BREAKERS

Do not use magnetic-type circuit breakers. Delta-Therm recommends using the following thermal-magnetic circuit breakers (or equivalent) to prevent nuisance tripping caused by inrush currents:

Westinghouse:	Types BA, EB, EHB, FB, HFB
Gen. Electric:	Types TEB, THED
Square D:	Types EH, FA

USE OF GROUND FAULT PROTECTIVE DEVICES AND TINNED COPPER BRAID

NEC CODE 2017, ARTICLE 426-22

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.

The metal covering shall provided an effective ground path.

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