

# TEK™ Series Constant Watt Heating Cable

## Product Specifications

### Application . . .

#### Long Line Temperature Maintenance or Freeze Protection

TEK series resistance constant watt heating cables are used where circuit lengths exceed the limitations of parallel resistance heating cables. Circuit lengths up to 12,000 feet (3,658 m) can be energized from a single power supply point.

The series circuitry of TEK provides consistent watt-per-foot power output along the entire length of the cable with no voltage drop.

TEK cables are approved for use in ordinary (nonclassified) and hazardous (classified) areas.

### Ratings . . .

Rated voltage <sup>1</sup> .....	for operation up to 600 Vac <sup>2</sup>
Max. maintenance temperature <sup>3</sup> .....	215°F (101°C) <sup>4</sup>
Max. continuous exposure temperature	
Power-off .....	450°F (232°C)
Minimum installation temperature .....	-60°F (-51°C)
Minimum bend radius	
@ 5°F (-15°C) .....	0.875" (22mm)
@ -76°F (-60°C) .....	1.25" (32 mm)

### Basic Accessories . . .

**Power Connection:** All TEK cables require a Terminator or cold lead transition for connection to power (available as a factory termination or a field fabricated kit). Refer to the back of this specification sheet for details.

**End-of-Circuit Termination:** An end-of-circuit termination must also be used with TEK cables. This termination, detailed on the back of this specification sheet, is available as a factory termination or a field fabricated kit.

### Notes . . .

1. Definition as stated in IEEE Standard 515. Specific voltage depends on circuit length and design conditions.
2. Maximum operating voltage is 575 Vac for CSA certification.
3. Watt density limitations are correlated to maintain temperatures.
4. Higher maintenance temperatures may be possible; contact Thermon for design assistance.



### Construction . . .

- 1 Heating Conductors (2 or 3)
- 2 Fluoropolymer Dielectric Insulation
- 3 Fluoropolymer Pairing Jacket
- 4 Nickel-Plated Copper Braid (BN)
- 5 Fluoropolymer overjacket provides additional protection to cable and braid where exposure to chemicals or corrosives is expected.

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### Available Cables . . .

Catalog Number <sup>1</sup>		Resistance per Conductor at 68°F (20°C)		Conductor Size <sup>2</sup>
2 Conductor	3 Conductor	Ohms/ft	Ohms/m	
TEK 2C40	TEK 3C40	0.004548	0.01492	16 AWG
TEK 2C50	TEK 3C50	0.002880	0.009449	14 AWG
TEK 2C60	TEK 3C60	0.001812	0.005945	12 AWG
TEK 2C70	TEK 3C70	0.001060	0.003478	10 AWG

### Notes . . .

1. Base cable includes nickel-plated copper braid (BN). Overjacket option is designated as a suffix to cable model number (example: TEK 2C40 BNOJ for overjacket option).
2. Consult factory for higher resistance conductor options.

### Terminations and Splices . . .

Prior to connection to power, TEK heating cables should be terminated using the Terminator DP-M or with an appropriate nonheating “cold lead” and a “hot-end” termination. To facilitate ease of installation and accommodate standard shipping lengths, in-line splices may also be required. These connections/terminations are available as factory fabricated assemblies or as field fabricated kits.

**Power Connection:** Provides fluoropolymer insulated nickel-plated stranded copper cold leads and ground wire extension plus required butt lug splices, insulating tape and sealant. A flexible stainless steel conduit that ends in a 3/4” fitting protects the leads. The number and size of the cold leads is based on the TEK heater type.

**End Termination:** The hot end (opposite end from power) utilizes an under insulation stainless steel fitting that houses the connect-tor lug, insulating tape, sealant and grounding lug. The size and style of the termination is based on the number and size of conductors.

**In-Line Splices:** When the circuit length exceeds the practical length of a cable reel or to facilitate the installation of the cable, an under insulation splice may be required. The splice utilizes a stainless steel housing (sized for the conductor type and number), butt lug splices, grounding lugs, insulating tape and sealant.



**CET:** Factory fabricated cold-end termination.  
**CETK:** Field fabricated cold-end termination kit.



**HET:** Factory fabricated hot-end termination.  
**HETK:** Field fabricated hot-end termination kit.



**HST:** Factory fabricated splice termination.  
**HSTK:** Field fabricated splice termination kit.

### Certifications/Approvals . . .



#### Factory Mutual Research

Ordinary Locations  
Hazardous (Classified) Locations  
Class I, Division 2, Groups B, C and D  
Class II, Division 2, Groups F and G  
Class III, Divisions 1 and 2  
Class I, Zone 2, Group IIC



#### Underwriters Laboratories Inc.

Hazardous (Classified) Locations  
Class I, Division 2, Groups A, B, C and D  
Class II, Division 2, Groups F and G  
Class III, Divisions 1 and 2  
Class I, Zone 2, Group IIC



#### Canadian Standards Association

Ordinary Locations  
Hazardous (Classified) Locations  
Class I, Division 2, Groups A, B, C and D  
Ex e II



**Terminator DP-M and ZP-M:** Designed to fabricate power connections, in-line splice connections or for making end terminations. Electrical connections are made in terminal blocks utilizing nickel-plated copper terminals to ensure corrosion-free electrical integrity. No cold leads are required.

