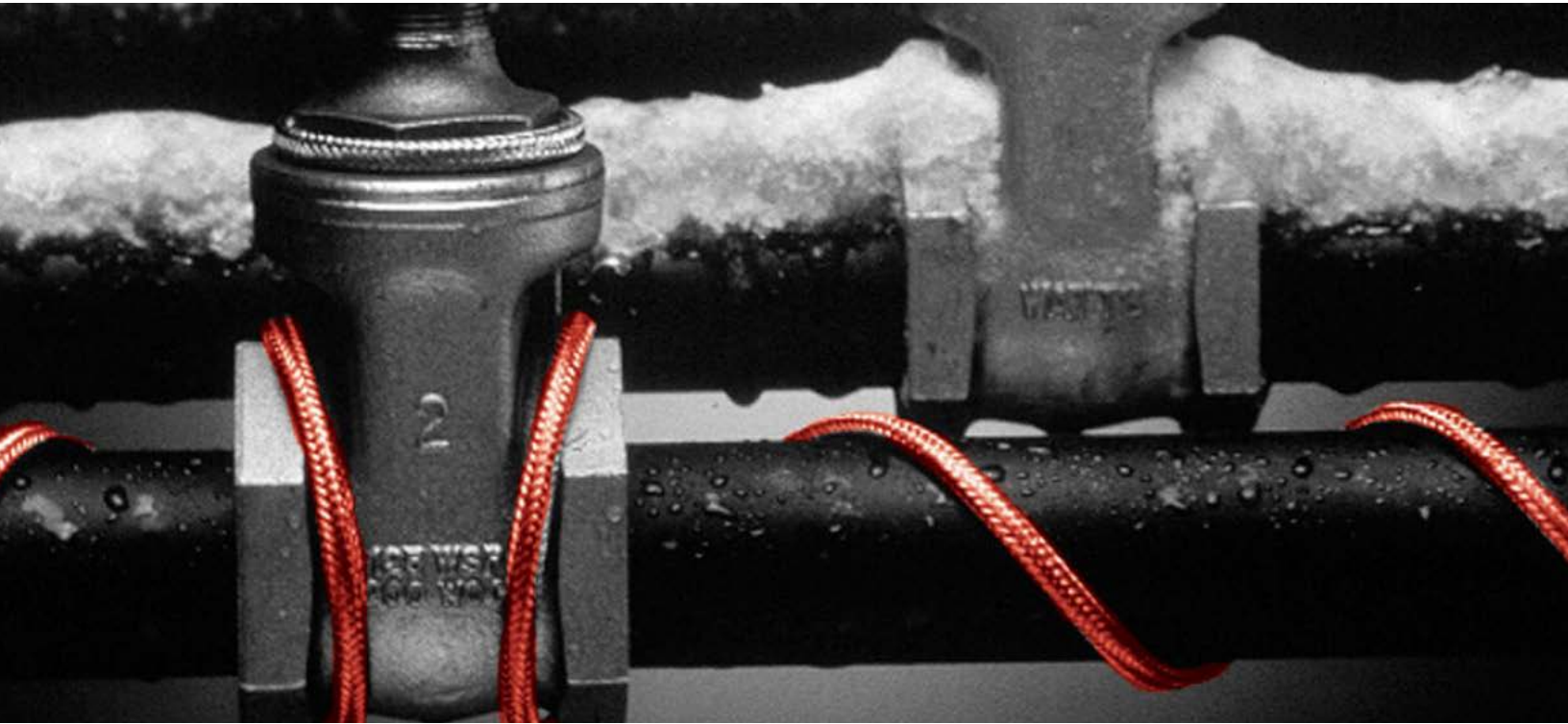


CONSTANT-WATTAGE HEATING CABLE

Introduction to Constant-Wattage Heating Cable



- ▶ **Precise and Constant Temperatures**
- ▶ **Temperatures up to 500° F (260° C)**
- ▶ **Ideal for Long Runs**
- ▶ **Can Be Cut-to-Length at Job Site**
- ▶ **Tension Wrapping Holds Resistance Wire in Place, Even Under Extreme Bending**

Wide Range of Applications

- Process maintenance
- Viscosity control
- Low to high temperature control
- Freeze protection
- Ordinary locations
- Hazardous locations

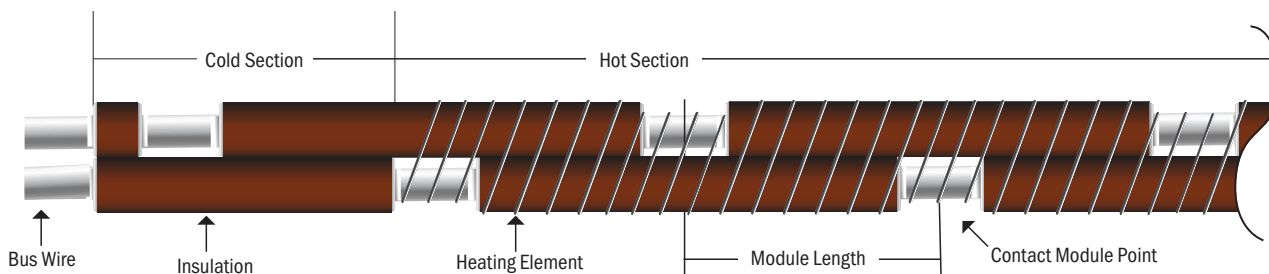


CONSTANT-WATTAGE HEATING CABLE

Constant-Wattage Heating Cable Selection Guide

BriskHeat® Constant-Wattage Heating Cables	FE Series	KE Series	KM Series	KK Series
Page	1-30	1-31	1-32	1-33
Maximum Exposure Temperature	400°F (204°C)	500°F (260°C)	500°F (260°C)	500°F (260°C)
Outer Jacket	FEP Extruded Jacket with Tinned Copper Overbraid	PFA Extruded Jacket	Polymide Film with Tinned Copper Overbraid	Polymide Film with Tinned Copper Overbraid
Available Voltages	120, 208, 240, 277, 480 VAC	120, 208, 240, 277, 480 VAC	120, 208, 240, 277, 480 VAC	120, 208, 240, 277, 480 VAC
Available Wattages	3, 5, 8, & 12 watts/ft (10, 16, 26, & 39 watts/m)	4, 8, & 12 watts/ft (13, 26, & 39 watts/m)	4, 8 & 12 watts/ft (13, 26, & 39 watts/m)	4, 8, 12, & 18 watts/ft (13, 26, 39, & 59 watts/m)
Nominal Dimensions	0.2 in x 0.3 in (5 mm x 8 mm) 12 AWG	0.2 in x 0.3 in (5 mm x 8 mm) 12 AWG	0.2 in x 0.3 in (5 mm x 8 mm) 12 AWG	0.15 in x 0.25 in (4 mm x 6 mm) 12 AWG
Weight per 500 Foot (152m) Spool	40 lb (18 kg)	41 lb (19 kg)	45 lb (20 kg)	30 lb (14 kg)
Dielectric Strength	Over 2000 volts	Over 2000 volts	Over 2000 volts	Over 2000 volts
Resistance to Moisture	Poor	Excellent	Good	Good
Resistance to Chemicals	Poor	Excellent	Good	Good
Resistance to Flame	Outstanding	Excellent	Outstanding	Excellent
Resistance to Radiation	Fair to good	Fair to good	Good	Outstanding flexibility after exposure to 10 ⁹ RADS

How Constant-Wattage Cable Works



Constant-Wattage cable uses a fixed resistance wire wrapped around two main conductors (bus wires). At specific intervals the insulation is removed from the bus wires, forming the Contact Module Points.

These Contact Module Points are staggered along the length of the cable. This creates consistent heating circuits known as the Module Length. When power is applied to the bus wires each complete Module Length heats at the rated wattage output.

The incomplete Module Lengths, at the beginning and end of each cable, do not heat. This allows the “Cold” ends to be safely placed inside of a controller or junction box.

CONSTANT-WATTAGE HEATING CABLE

FE Constant-Wattage Heating Cable

(FE Series)

- ▶ **Temperatures up to 400 °F (204 °C)**
- ▶ **Power remains constant regardless of temperature**
- ▶ **Can be cut-to-length at job site**
- ▶ **Ideal for wide range of general purpose applications:**
 - Mid-range process temperature control for food and chemical processing
 - Water lines
 - Fire protection systems
 - Fuel oil
 - Condensate return
 - Hot water lines
 - Lines periodically purged with 250 psig steam
 - Not suitable for installation in wet locations and outdoor use

Specifications:

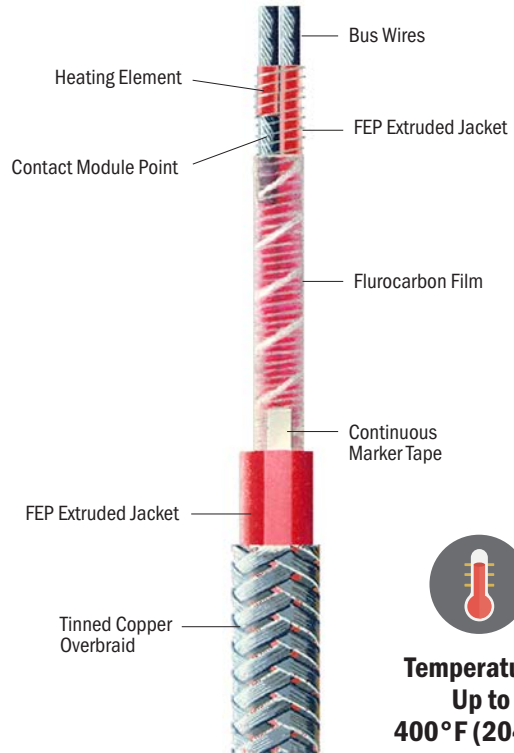
Exposure Temperature Range: -22°F to 400°F (-30°C to 204°C)

Minimum Bend Radius: 1.0 in (25 mm)

Bus Wire Gauge: 12 AWG

Dimensions: 0.2 in x 0.3 in (5 mm x 8 mm)

Weight: 40 lb (18 kg) per 500-foot (152 m) spool



Ordinary Locations
Hazardous Locations:
Class I, Division 2, Groups B, C, & D
Class II, Division 2, Groups F, & G
Class III, Division 2



Tinned copper braid only
Ordinary locations
120, 240 VAC only



Approvals valid only when used with appropriate heating cable and installation accessories, and installed in accordance with all applicable instructions, codes, and regulations.

Ordering Information:

Part Number Matrix

FECAB 3 120 B

Watts/ft:
3, 5, 8, 12

Voltage:
120, 208, 240, 277, 480

Braid Type:
B- (tinned copper metal braid), SS- (stainless steel overbraid)

See pages 1-34 through 1-35 for connection/termination kits and accessories.

Maximum Circuit Length in ft (m)

Cable	120 VAC	208 VAC	240 VAC	277 VAC	480 VAC
3 watts/ft (10 watts/m)	640 (195)	1110 (338)	1280 (390)	N/A	2560 (780)
5 watts/ft (16 watts/m)	385 (117)	665 (203)	770 (234)	N/A	1535 (468)
8 watts/ft (26 watts/m)	240 (73)	415 (127)	480 (146)	555 (169)	960 (293)
12 watts/ft (39 watts/m)	160 (49)	277 (85)	320 (98)	370 (113)	640 (195)

Circuit Module Length in ft (m)

Cable Type	120 VAC	208 VAC	240 VAC	277 VAC	480 VAC
3 watts/ft (10 watts/m)	2.0 (0.6)	4.0 (1.2)	4.0 (1.2)	N/A	8.0 (2.4)
5 watts/ft (16 watts/m)	2.0 (0.6)	4.0 (1.2)	3.0 (0.9)	N/A	6.0 (1.8)
8 watts/ft (26 watts/m)	2.0 (0.6)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	6.0 (1.8)
12 watts/ft (39 watts/m)	2.0 (0.6)	6.0 (1.8)	2.0 (0.6)	4.0 (1.2)	4.0 (1.2)

When ordering, please allow a minimum of 1 module length extra for terminations.

IMPORTANT: Temperature controller is required for this product. See options starting at page 8-1.

CONSTANT-WATTAGE HEATING CABLE

KE Constant-Wattage Heating Cable
(KE Series)

- ▶ **Temperatures up to 500° F (260° C)**
- ▶ **Power remains constant regardless of temperature**
- ▶ **Moisture, chemical, flame, and radiation resistant**
- ▶ **Can be cut-to-length at job site**
- ▶ **Ideal for a wide range of applications in corrosive environments:**
 - Freeze protection
 - Viscosity control
 - High temperature process control
 - Asphalt plants
 - Oil refineries
 - Mines
 - Chemical and petrochemical processing areas
 - Other explosive and corrosive atmospheres
 - Severe arctic cold

Specifications:

Exposure Temperature Range: -22°F to 500°F (-30°C to 260°C)

Minimum Bend Radius: 1.0 in (25 mm)

Bus Wire Gauge: 12 AWG

Dimensions: 0.2 in x 0.3 in (5 mm x 8 mm)

Weight: 41 lb. (19 kg) per 500-foot (152 m)



Ordinary Locations
Hazardous Locations:
Class I, Division 2, Groups B, C, & D
Class II, Division 2, Groups F, & G
Class III, Division 2



Approvals valid only when used with appropriate heating cable and installation accessories, and installed in accordance with all applicable instructions, codes, and regulations.

Ordering Information:

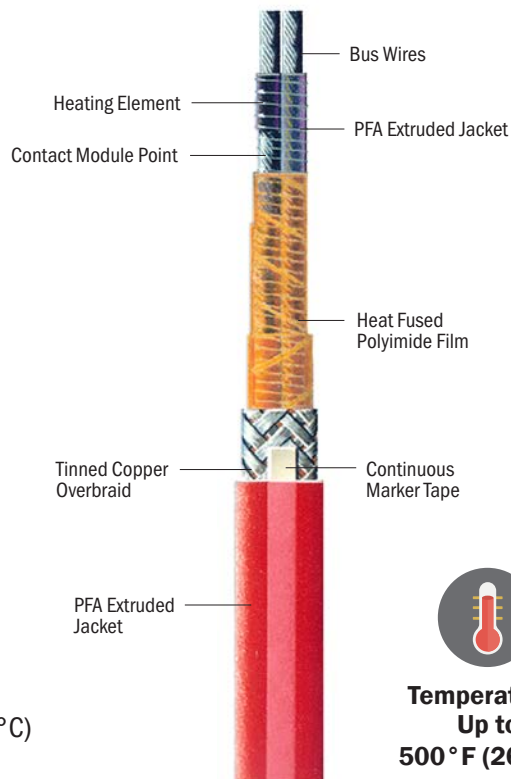
Part Number Matrix

KECAB	4	120
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Watts/ft:
4, 8, 12

Voltage:
120, 208, 240, 277, 480

See pages 1-34 through 1-35 for connection/termination kits and accessories.



Temperatures Up to 500° F (260° C)

Maximum Circuit Length in ft (m)

Cable Type	120 VAC	208 VAC	240 VAC	277 VAC	480 VAC
4 watts/ft (13 watts/m)	480 (146)	830 (253)	960 (293)	1110 (338)	1920 (585)
8 watts/ft (26 watts/m)	240 (73)	415 (127)	480 (146)	555 (169)	960 (293)
12 watts/ft (39 watts/m)	160 (49)	277 (85)	320 (98)	370 (113)	640 (195)

Circuit Module Length in ft (m)

Cable Type	120 VAC	208 VAC	240 VAC	277 VAC	480 VAC
4 watts/ft (13 watts/m)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	8.0 (2.4)
8 watts/ft (26 watts/m)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	6.0 (1.8)
12 watts/ft (39 watts/m)	2.0 (0.6)	6.0 (1.8)	4.0 (1.2)	4.0 (1.2)	6.0 (1.8)

When ordering, please allow a minimum of 1 module length extra for terminations.

IMPORTANT: Temperature controller is required for this product. See options starting at page 8-1.

CONSTANT-WATTAGE HEATING CABLE

KM Constant-Wattage Heating Cable
(KM Series)

- ▶ **Temperatures up to 500° F (260° C)**
- ▶ **Power remains constant regardless of temperature**
- ▶ **Moisture, chemical, flame, and radiation resistant**
- ▶ **Can be cut-to-length at job site**
- ▶ **Ideal for a wide range of applications:**
 - Freeze protection
 - Viscosity control
 - High temperature process control
 - Power plants
 - Oil refineries
 - Water treatment plants
 - Food processing plants
 - Other explosive atmospheres

Specifications:

Exposure Temperature Range: -22°F to 500°F (-30°C to 260°C)

Minimum Bend Radius: 1.0 in (25 mm)

Bus Wires Gauge: 12 AWG

Dimensions: 0.2 in x 0.3 in (5 mm x 8 mm)

Weight: 45 lb (20 kg) per 500-foot (152 m) spool:



Ordinary Locations
Hazardous Locations:
Class I, Division 2, Groups B, C, & D
Class II, Division 2, Groups F, & G
Class III, Division 2



Approvals valid only when used with appropriate heating cable and installation accessories, and installed in accordance with all applicable instructions, codes, and regulations.

Ordering Information:

Part Number Matrix

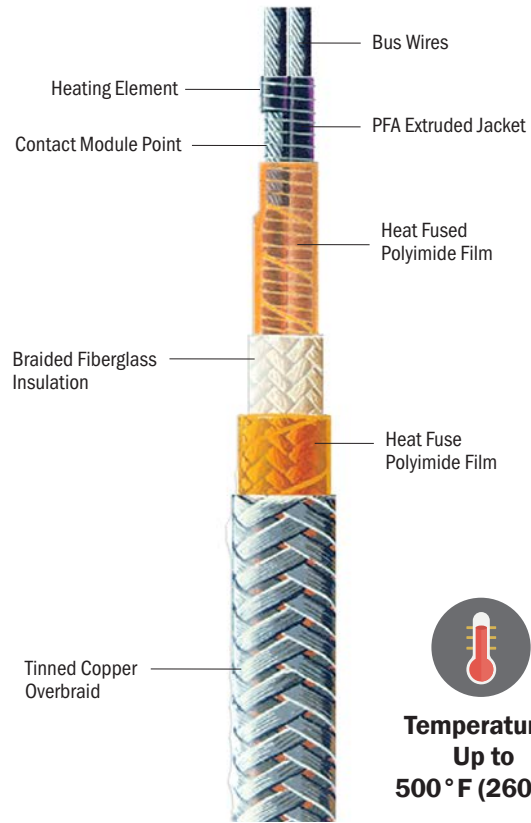
KMCAB	8	120	12
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Watts/ft: _____
4, 8, 12

Voltage: _____
120, 208, 240, 277, 480

Bus Gauge: _____
12 AWG

See pages 1-34 through 1-35 for connection/termination kits and accessories.



Temperatures Up to 500° F (260° C)

Maximum Circuit Length in ft (m)

Cable Type	120 VAC	208 VAC	240 VAC	277 VAC	480 VAC
4 watts/ft (13 watts/m)	480 (146)	830 (253)	960 (293)	1110 (338)	1920 (585)
8 watts/ft (26 watts/m)	240 (73)	415 (127)	480 (146)	555 (169)	960 (293)
12 watts/ft (39 watts/m)	160 (49)	277 (85)	320 (98)	370 (113)	640 (195)

Circuit Module Length in ft (m)

Cable Type	120 VAC	208 VAC	240 VAC	277 VAC	480 VAC
4 watts/ft (13 watts/m)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	8.0 (2.4)
8 watts/ft (26 watts/m)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	6.0 (1.8)
12 watts/ft (39 watts/m)	4.0 (1.2)	6.0 (1.8)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)

When ordering, please allow a minimum of 1 module length extra for terminations.

IMPORTANT: Temperature controller is required for this product. See options starting at page 8-1.

CONSTANT-WATTAGE HEATING CABLE

KK Constant-Wattage Heating Cable (KK Series)

- ▶ **Temperatures up to 500° F (260° C)**
- ▶ **Power remains constant regardless of temperature**
- ▶ **Can be cut-to-length at job site**
- ▶ **Moisture, chemical, flame, and radiation resistant**
- ▶ **Ideal for a wide range of high temperature applications:**
 - Viscosity control
 - Asphalt lines
 - Heavy oil lines
 - Nuclear environments
 - Locations where halogens are not permitted
 - Process lines subject to high pressure steam blow down

Specifications:

Exposure Temperature Range: -22°F to 500°F (-30°C to 260°C)

Minimum Bend Radius: 1.0 in (25 mm)

Bus Wire Gauge: 12 AWG

Dimensions: 0.15 in x 0.25 in (4 mm x 6 mm)

Weight: 30 lb. (14 Kg) per 500-foot (152 m) spool



Ordinary Locations
Hazardous Locations:
Class I, Division 2, Groups B, C, & D
Class II, Division 2, Groups F, & G
Class III, Division 2



Approvals valid only when used with appropriate heating cable and installation accessories, and installed in accordance with all applicable instructions, codes, and regulations.

Ordering Information:

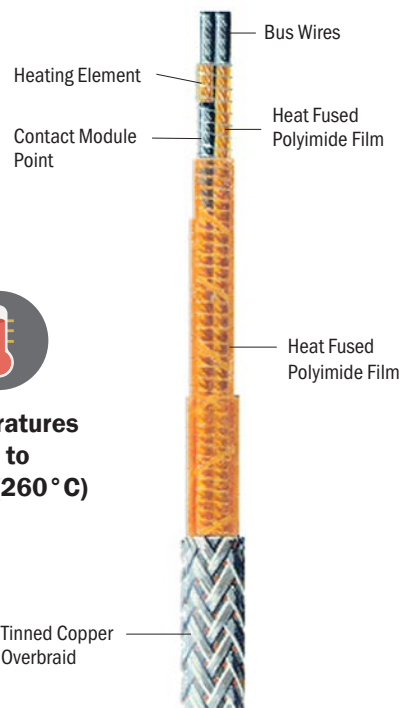
Part Number Matrix:

KKCAB	8	120
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Watts/ft: _____
4, 8, 12, 18

Voltage: _____
120, 208, 240, 277, 480

See pages 1-34 through 1-35 for connection/termination kits and accessories.



Temperatures Up to 500° F (260° C)

Maximum Circuit Length in ft (m)

Cable Type	120 VAC	208 VAC	240 VAC	277 VAC	480 VAC
4 watts/ft (13 watts/m)	480 (146)	830 (253)	960 (293)	1110 (338)	1920 (585)
8 watts/ft (26 watts/m)	240 (73)	415 (127)	480 (146)	555 (169)	960 (293)
12 watts/ft (39 watts/m)	160 (49)	277 (85)	320 (98)	370 (113)	640 (195)
18 watts/ft (59 watts/m)	105 (32)	185 (56)	215 (65)	245 (75)	425 (130)

Circuit Module Length in ft (m)

Cable Type	120 VAC	208 VAC	240 VAC	277 VAC	480 VAC
4 watts/ft (13 watts/m)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	8.0 (2.4)
8 watts/ft (26 watts/m)	2.0 (0.6)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	6.0 (1.8)
12 watts/ft (39 watts/m)	2.0 (0.6)	4.0 (1.2)	4.0 (1.2)	4.0 (1.2)	7.0 (2.1)
18 watts/ft (59 watts/m)	1.75 (0.5)	3.0 (0.9)	3.5 (1.1)	4.0 (1.2)	5.5 (1.7)

When ordering, please allow a minimum of 1 module length extra for terminations.

IMPORTANT: Temperature controller is required for this product. See options starting at page 8-1.

CONSTANT-WATTAGE HEATING CABLE

FE Connection/Termination Kits



FECABUC Contents

**FECABKC:
Lead/End Termination Kit**

- 5-Lead pouches
 - 5-End pouches
 - 10-Shrink tubes
- Enough to complete five lead terminations and five end terminations.

**FECABUC:
Universal Connection/Termination Kit**

- 3-Lead pouches
 - 2-End pouches
 - 6-Shrink tubes
 - 1-3 oz (89 ml) tube RTV sealant
 - 1-Caution label
 - 2-Ring terminals
 - 2-Splice connectors 12-10
 - 3-Wire nuts
 - 1-1 in NPT Pipe standoff
 - 2- Pipe straps
- Enough to complete one power input connection or one power input splice, three lead terminations and two end terminations.

NOTE: Requires double hub junction box.

**FECABLP:
Lead Termination Kit**

- 1-Lead pouch
 - 1-Shrink tube
- Enough to complete one lead termination.

**FECABSK:
Splice Kit**

- 3-Lead pouches
 - 1-End pouch
 - 4-Shrink tubes
 - 1-3 oz (89 ml) Tube RTV sealant
 - 1-Caution label
 - 3-Ring terminals
 - 3-Splice connectors 12-10
- Enough to complete one in-line splice or one tee splice, three lead terminations and one end termination.

NOTE: Requires single hub junction box, pipe standoff, two pipe straps.

**FECABEP:
End Termination Kit**

- 1-End pouch
 - 1-Shrink tube
- Enough to complete one end termination.

KE, KM, KK Connection/Termination Kits



KCABUC Contents

**KCABKC:
Lead/End Termination Kit**

- 5-Lead pouches
 - 5-End pouches
 - 1-3 oz (89 ml) Tube RTV sealant
- Enough to complete five lead terminations and five end terminations.

**KCABUC:
Universal Connection/Termination Kit**

- 2-Lead pouches
 - 2-End pouches
 - 1-3 oz (89 ml) Tube RTV sealant
 - 1-Caution label
 - 2-Ring terminals
 - 2-Splice connectors 12-10
 - 2-Wire nuts
 - 1-1 in NPT pipe standoff
 - 2- Pipe straps
- Enough to complete one power input connection or one power input splice, two lead terminations and two end terminations.

NOTE: Requires double-hub junction box.

**KCABLP:
Lead Termination Kit**

- 1-Lead pouch
- Enough to complete one lead termination.

NOTE: Requires RTV silicone

**KCABSK:
Splice Kit**

- 3-Lead Pouches
 - 3-End pouches
 - 1-3 oz (89 ml) Tube RTV sealant
 - 1-Caution label
 - 3-Ring terminals
 - 3-Splice connectors 12-10
- Enough to complete one in-line splice or one tee splice, three lead terminations and three end terminations.

NOTE: Requires single hub junction box, pipe standoff, two pipe straps.

**KCABEP:
End Termination Kit**

- 1-End pouch
- Enough to complete one end termination.

NOTE: Requires RTV silicone.

HEATING CABLE ACCESSORIES

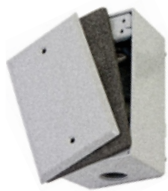
Heating Cable Accessories



Adhesive Tape

Adhesive tape used for mounting heating cable.

Part No.	Description
PSAT36A	Fiberglass Adhesive Tape: Size: 0.5 in x 108 ft (13 mm x 38m) Temp Limit: 350°F (176°C)
AAT260	Aluminum Adhesive Tape: Size: 2 in x 180 ft (51 mm x 55 m) Temp Limit: 350°F (176°C)
AAT2180	Aluminum Adhesive Tape: Size: 2 in x 180 ft (51 mm x 55 m) Temp Limit: 550°F (288°C)



Junction Box

Metallic enclosure with watertight cover. Suitable for ordinary locations. NEMA 3R rated for indoor/outdoor use.

File No. 195978 File No. C22.2 No. 18

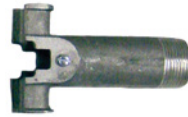
Part No.	Description
JBM050	Metallic Box 3 hub 1/2 in NPT Dimensions: 2 in x 4-1/2 in x 2-3/4 in (51 mm x 114 mm x 70 mm)
JBM075	Metallic Box 3 hub 3/4 in NPT Dimensions: 2 in x 4-1/2 in x 2-3/4 in (51 mm x 114 mm x 70 mm)
JBM100	Metallic Box 3 hub 1 in NPT Dimensions: 2-5/8 in x 4-1/2 in x 2-3/4 in (67 mm x 114 mm x 70 mm)



Hazardous Location Junction Box

Metallic enclosure with watertight explosion proof cover. Suitable for hazardous locations. C1 D1 NEMA 4x rated for indoor/outdoor use.

Part No.	Description
JBH075	Metallic box 7 hub 3/4 in NPT Dimensions: 3-1/2 in x 4-5/8 in x 4-5/8 in (89 mm x 117 mm x 117 mm)
JBH100	Metallic box 7 hub 1 in NPT Dimensions: 3-1/2 in x 4-5/8 in x 4-5/8 in (89 mm x 117 mm x 117 mm)



Pipe Standoff

Aluminum standoff for mounting junction boxes to pipe.

Part No.	Description
PSOCAB075	3/4 in NPT thread
PSOCAB010	1 in NPT thread



Pipe Strap

Stainless steel pipe straps used to secure pipe standoff to pipe.

Part No.	Description
BPSCAB2-6	Adjustable from: 2 in to 6 in (51mm to 152mm)



RTV Sealant

Silicone sealant used to seal lead pouches, end pouches, and pipe standoffs.

Part No.	Description
RTV3.0	3 oz. (89 ml)



Monitor Light Kit

Provides an LED end of circuit continuity indication for all types of heating cable. Suitable for ordinary locations. NEMA 3R rated for outdoor/wet area use.

Part No.	Description
MLK1001	120 V LED
MLK2001	240 V LED

Note: Lead termination kit required.
For SL series cables use SLCABLP
For FE series cables use FECABLP
For KE, KK, and KM series cables use KCABLP



Heat Conductive Putty

Used to fill voids between cable and pipe surface.

Part No.	Description
HCP1	Size: 1 lb. (0.5 kg)
HCP3	Size: 3 lb. (1.4 kg)



Electrical Tracing Caution Label

Recommended for every 10 ft (3 m) of heat trace.

Part No.	Description
BCLCAB	Caution label (English)
BCLCAB-DE	Caution label (Deutsch)
BCLCAB-ES	Caution label (Español)
BCLCAB-FR	Caution label (Français)
BCLCAB-IT	Caution label (Italiano)