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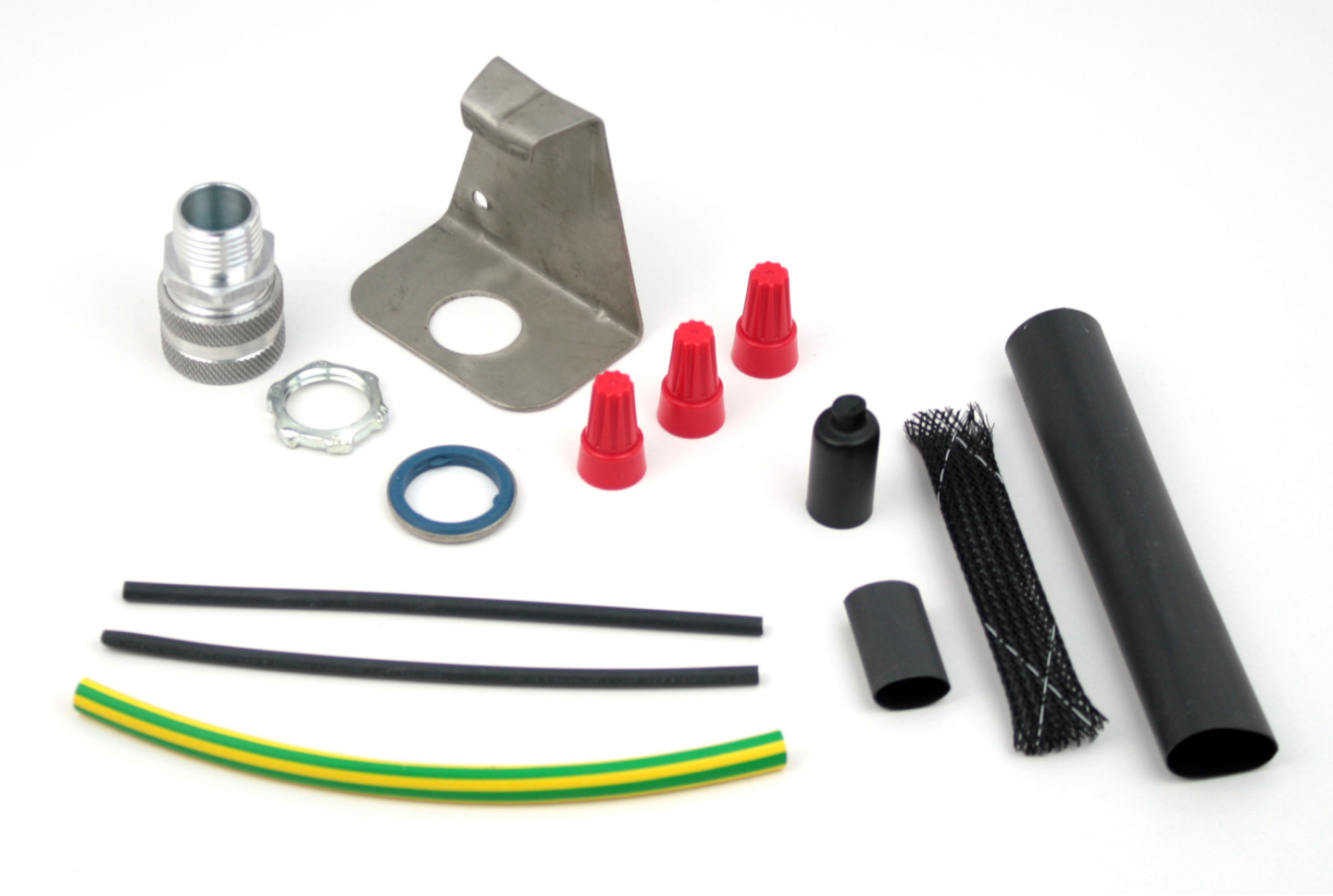
SR-PWR-KIT Power Connection Kit (part #JSR00) **Installation Instruction for Self-Regulating Heating Cable (Includes End-Seal Kit)** (part #JSR12)



Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage. Retain instructions for future reference.

Description: The SR-PWR-KIT power connection kit (part #JSR00) is suitable for use only with the ET-SR and PT-SR series heating cables. The kit provides material for one power connection and one termination. The ET-SR and PT-SR series cables can be used for pipe freeze protection and/or roof and gutter deicing. This manual includes installation instructions for the SR-PWR-KIT and the ET-END-KIT End Seal Kit (part #JSR12).

Assembly Tools Needed

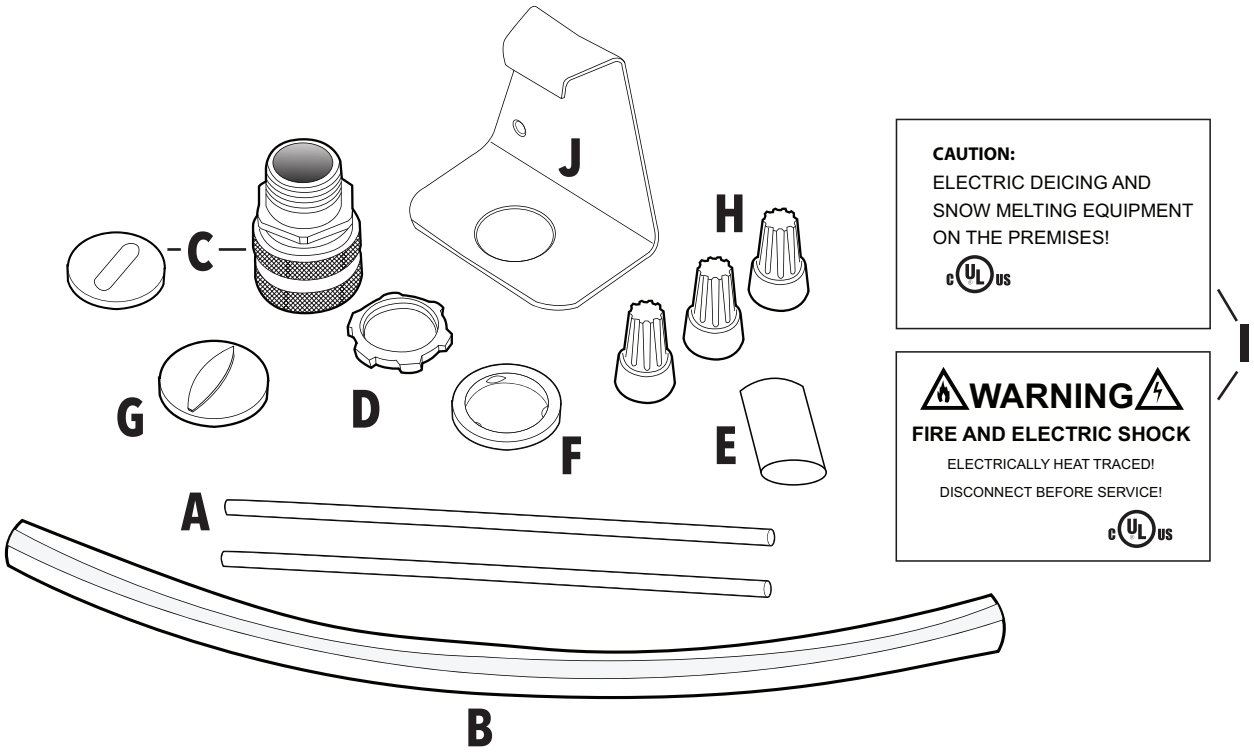
- Utility knife
- Wire cutter
- Needle-nose pliers
- Adjustable wrench
- Pen
- Screwdriver
- Heat gun
- Measuring tape

General Safety Information

Read and understand all instructions in this manual, including all installation instructions and safety warnings, before beginning the installation. Electrical cables can present a fire, shock, and arcing hazard if they are damaged or not installed correctly.

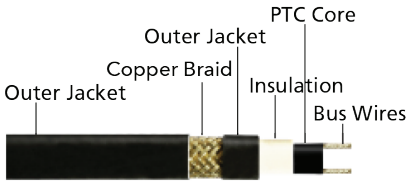
1. Installation must be in compliance with the National Electrical Code (NEC).
2. Use 30-mA ground-fault protection on each heating cable branch circuit for maximum protection.
3. The black heating cable core is conductive and can short. It must be properly insulated and kept dry.
4. The conductive layer of this heating device must have a suitable grounding terminal.
5. Installer should apply the nameplate label to surface of the junction box.
6. Keep components and ends of heating cable dry before installation.
7. Do not break braid or bus wire strands when scoring the jacket or core. Damaged bus wires can overheat or short.
8. Keep the bus wires separated. The bus wires will short if they touch each other.
9. Replace damaged parts. Heat-damaged components can short.
10. Use heat gun or torch with a soft yellow, low-heat flame--not a blue flame. Keep the flame moving to prevent overheating or blistering the heat-shrinkable tubes.
11. Do not heat other components.
12. Use only fire-resistant insulation materials such as fiberglass wrap.
13. De-energize all circuits before installation or service.
14. The heating cable should not be embedded in insulation or roofing material.
15. Do not twist cable during installation.
16. Save all instructions for future reference.

CAUTION: *Charring or burning the heat-shrinkable tubes in this kit will produce fumes that may cause eye, skin, nose, and throat irritation.*



Item	Description	Quantity
A	Black Shrinkable Tubing (1/8 in. × 5 ½ in.)	2
B	Green/Yellow Shrinkable Tubing (1/4 in. × 6 in.)	1
C	Seal Fitting and White Grommet	1
D	Lock Nut	1
E	Black Shrinkable Tubing (1/2 in. × 1 in.)	1
F	Gasket	1
G	Blue Grommet	1
H	Wire Nuts	3
I	Labels	4
J	Mounting Bracket for Piping	1

Power Connection Kit Installation Instructions



Structure of model ET-SR

Figure 1

1. After the seal fitting is open, put the junction box cap, strain relief disk, grommet, and body onto the power connection of cable.

Figure 2

2. Slice completely around heating cable outer jacket, and then down a distance of approximately 7 inches (178mm). Be careful not to cut braid or inner jacket. Then, bend the heating cable to break the jacket where sliced, and peel off outer jacket.

Figure 3

3. Carefully push the braid back to loosen and spread apart as shown in Figure 3.

Figure 4

4. Bend heating cable as shown in Figure 4, so it can be pushed through the braid opening.

Figure 5

5. Place braid to one side of cable. Cut inner jacket of cable back approximately 6 inches (152mm).

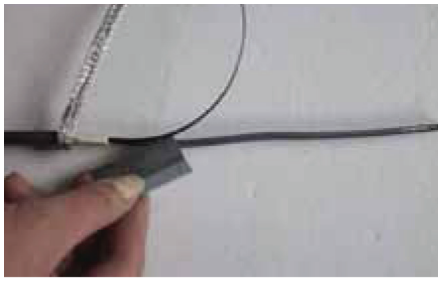


Figure 6

6. Shave off outer matrix material from conductors with utility knife. See Figure 6.

Figure 7

7. Peel back exposed wires from central matrix material as shown in Figure 7. Do not cut bus wire strands!

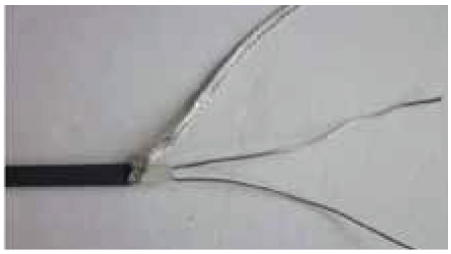


Figure 8

8. Cut off remaining center core of matrix, leaving the bare conductors. Do not cut bus wires!

Figure 9

9. Slide the 5½-inch (140mm) black shrinkable tubes in place up to conductive core.

Power Connection Kit Installation Instructions (continued)

Figure 10

10. Carefully shrink tubing by continuously moving the heat source back and forth to heat evenly. Be careful not to damage heating cable.

Figure 11

11. Slide the green/yellow tube over braid and heat evenly to shrink.

Figure 12

12. Center the 1-inch (25mm) black shrinkable tube over the end of heating cable as shown in Figure 12.

Figure 13

13. Evenly heat the black shrinkable tube until it shrinks and adhesive flows out both ends.

Figure 14-1

Figure 14-2

14. While tube is still hot, pinch the tube with pliers, between the wires, and hold for 10 seconds to ensure seal. See Figures 14-1 and 14-2.

Figure 15

15. Slide parts in place as shown in Figure 15.

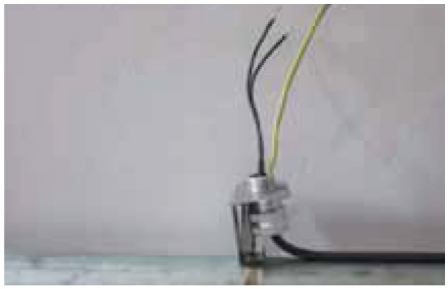


Figure 16

16. For pipe protection, loosely attach the metal pipe-mounting bracket to the pipe with the metal band. Position the bracket so that the cable and fitting come straight up and through the hole. Then, tighten the band.

Figure 17

17. Use a metallic junction box to ensure a proper grounding. Insert heating cable and tighten.

NOTE: For ET-SR-240 heating cables, when used in wet locations, follow instructions provided with junction box to seal out water.

NOTE: Allow at least 6 in. of lead wire inside an outlet box.

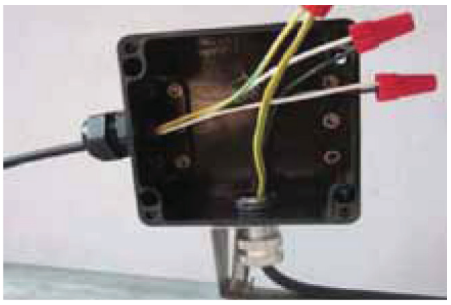


Figure 18

18. Make connections as shown in Figure 18. Connect the power conductors to the cable leads. Connect the incoming supply ground to the cable braid and to the green ground wire. The included wire nuts are not for use with aluminum feed wires. The junction box needs to be grounded.

Figure 19

19. For roof and gutter applications, put warning label on junction box as shown in Figure 19.

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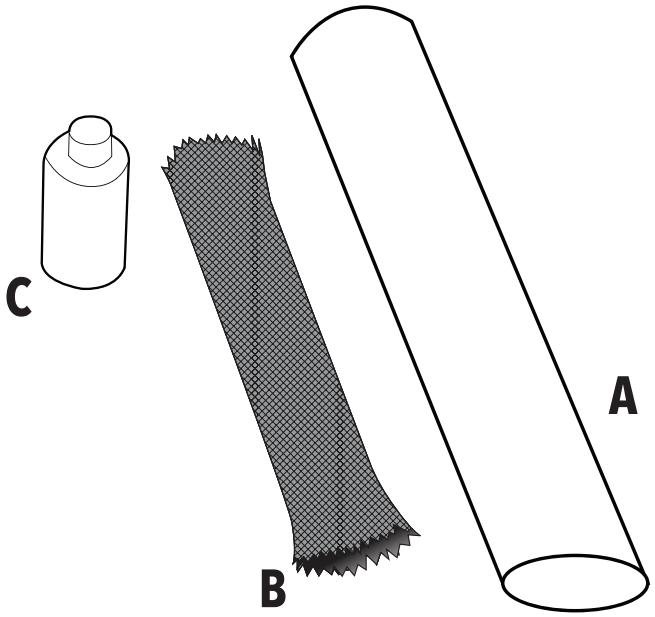
ET-END-KIT End Seal Kit Installation Instructions

(part #JSR12)



Item	Description	Quantity
A	Heat-Shrink Tube (5 in. long x ¾ in. dia.)	1
B	Woven Braid Sleeving (4 in. long x ½ in. dia.)	1
C	Heat-Shrink Cap (½ in. dia)	1

WARNING:

ELECTRIC SHOCK HAZARD: Disconnect all power before installing or servicing heating cable and accessories. A qualified person must perform installation and service of heating cable and accessories. Heating cable must be effectively grounded in accordance with the National Electrical Code. Failure to comply can result in personal injury or property damage.

Note:

1. All electrical wiring, including GFCI (Ground-Fault Circuit Interrupters), must be done according to the National Electrical Code or local codes by a qualified person.
2. Article 426 of ANSI/NFPA 70 of the National Electrical Code (NEC) and Section 62 of CAN/CSA-C22.1, Canadian Electrical Code, Part I (CEC) govern the installation of this heat system.
3. The ET-END-KIT End Seal Kit is suitable for use with ET-SR heating cables.
4. Keep ends of heating devices and kit components dry before and during installation.

ELECTRIC SHOCK HAZARD: To prevent short circuits, do not connect the bus wires together. Keep braid out of heat shrink cap.

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46DV PIPE HEATING CABLE & 4FB1 DEICING AND SNOW MELTING EQUIPMENT

END SEAL KIT INSTALLATION INSTRUCTIONS

1. Score the outer jacket 2 in. from the end of the cable. Remove the jacket to expose the braid.
   CAUTION: When removing the outer jacket, be careful not to damage the braid or the base cable insulation.

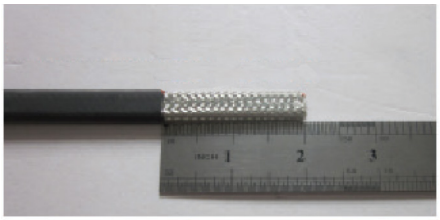

Figure 1

2. Push the braid back and cut ¾ in. off the end of the base cable.

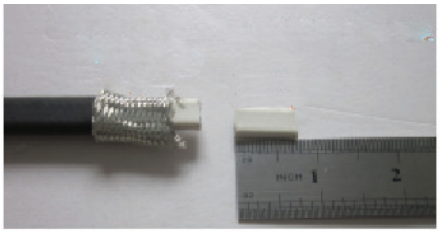

Figure 2

3. Slide the heat-shrink cap over the end of the cable. Apply heat evenly until it shrinks around the cable.

Figure 3

Figure 4

4. Pull the pushed-back braid over the sealed end cap and twist the braid end together.

Figure 5

5. Slide the 4 in. woven braid sleeving over the end of the cable, allowing at least ½ in. to extend past the end of the cable.

Figure 6

6. Slide the 5-in. heat-shrink tube over the woven braid piece, allowing ½ in. to extend past the end of each end of the woven sleeving.

7. Apply heat evenly to the heat shrink tube until it shrinks around the cable.

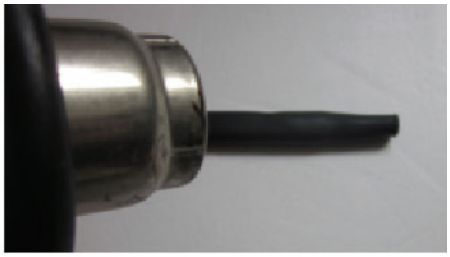

Figure 7

8. While the shrink tubing is still hot, gently squeeze the end of the shrink tube with pliers and hold until cool. The end must remain visibly sealed when the pliers are removed. If the tube does not remain sealed, then repeat steps 7 and 8.

Figure 8-1

Figure 8-2