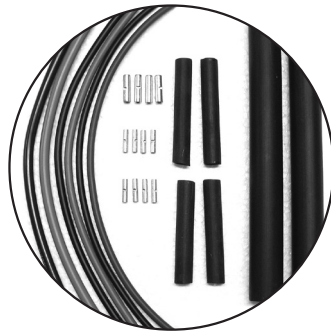


**BRISK-1**  
Splice Kit &  
General Field Repair  
Instructions



**Series Resistance  
Single Conductor  
Splice Kit**

**Usage**

These instructions refer only to Britech custom TXLP/1 single conductor heating cables. Please refer to your custom heating cable product manual for complete cable installation instructions and operational requirements.

**Choosing the Appropriate Slice Connector**

It is important to use the appropriate slice connector and cold lead to match the amperage draw of the cable being repaired.

Gauge No.	Amperage
#12	up to 20 A
#10	20A - 30 A
#8	30A - 45 A

**KIT CONTENTS**

- 4x #12/14 Butt Splice Crimp Connectors
- 8x #08/10 Butt Splice Crimp Connectors
- 1x 12" Length of RWU 90 Green 12 AWG Wire
- 1x 12" Length of RWU 90 Black 12 AWG Wire
- 1x 12" Length of RWU 90 Green 10 AWG Wire
- 1x 12" Length of RWU 90 Black 10 AWG Wire
- 1x 12" Length of RWU 90 Green 08 AWG Wire
- 1x 12" Length of RWU 90 Black 08 AWG Wire
- 4x Inner Heat Shrink Sleeve 3" Long
- 2x Outer Heat Shrink Sleeve 6" Long

**TOOLS REQUIRED**

- Side Cutters to trim area to be spliced
- Co-Ax Wire Stripper & Wire Stripper (14-08)
- Hand Crimping Tool
- Heat Gun for shrink tubing
- Megger to test insulation after the splice
- Volt-Ohm Meter to check resistance

**Use this Kit Only with Single Conductor Heating Cables**



**Additional Splice Kits Available:**

**BRISK-2:** For use with TXLP/2, SNOW-MAT™, SNOW-MELT™ cables.

**BRISK-TC:** For use with BRI-THIN™ and TECH-MAT™ systems.

*For product selection or technical assistance contact Britech.*

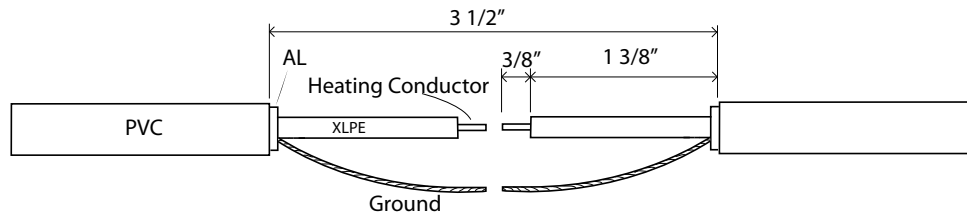


**WARNING:** Burning or charring of the heat-shrink tubing included in this kit will produce fumes that may cause eye, skin, nose or throat irritation. Use heat gun carefully when applying heat-shrink tubing.

**I. Simple Method — Nicked or Cut Cable**

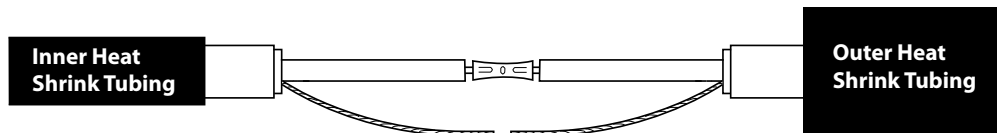
**1** Cut heating cable at point of nick or cut. Slide 6" shrink tubing to either end of heating cable.

**2** Strip both ends of the exposed heating cable to show center conductor and ground wire.



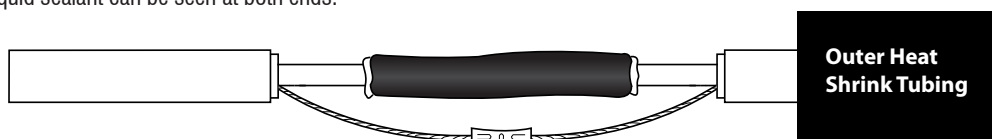
**3** Push inner heat shrink tubing over heating cable end.

**4** Push large heat shrink tubing over one end and install crimp connector on center conductors.



**5** Center inner heat shrink tubings over crimp. Heat with hot air gun until tubing is completely shrunk and some excess liquid sealant can be seen at both ends.

**6** Let the splices cool down for 1 - 2 minutes. Then install crimp connector on the ground wires.



**7** Pull the outer heat shrink tubing back over one end of the splice and shrink down with hot air gun (start from the center of the splices and work towards both ends). Make sure heat is applied around the tubing and avoid overheating. If tubing starts to get glossy this is a sign of overheating.

**8** Stop heating when the outer tubing is tight and some excess sealant protrudes from both ends.

Allow the finished splice to cool down for 5-10 minutes. Measure insulation, total resistance and continuity.



**II. Optional Method — Replace Damaged Cable**

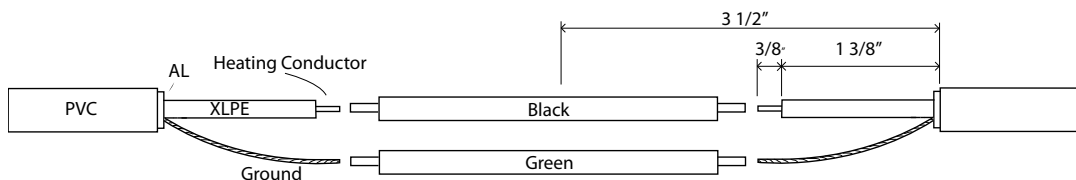
**IMPORTANT:** If the length of defective cable is  $\geq 1\%$  of the original cable length, do not use this method. Cutting off excessive cable may cause over-heating and system failure. Consult Britech for technical assistance.

**1** Determine the length of damaged cable that needs to be removed. **If the damaged portion is  $\geq 1\%$  of the original cable length, DO NOT use this method.** Consult Britech.

**2** Clean heating cables thoroughly. Make sure all parts exposed are clean & dry. Slide 6" shrink tubings over both sides of the heating cables.

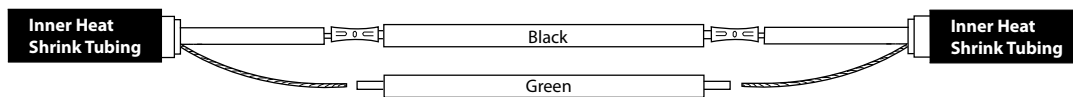
**3** Strip both ends of the exposed heating cable to show center conductor and ground wire.

**4** Strip both cold leads (BLACK and GREEN)  $3/8"$  to exposed center conductor.



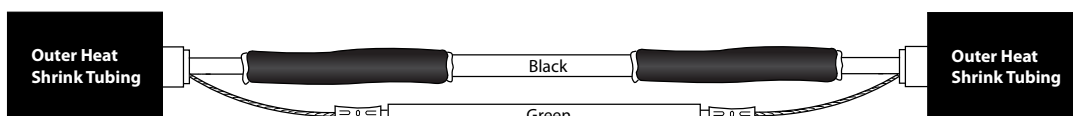
**5** Push inner heat shrink tubing over the cable ends. Then push the large heat shrink tubing over each end.

**6** Splice resistance wires to the BLACK cold lead.



**7** Center inner heat shrink tubings over crimp. Heat with hot air gun until tubing is completely shrunk and some excess liquid sealant can be seen at both ends.

**8** Let the splices cool down for 1 - 2 minutes. Then splice ground wires to the GREEN cold lead.



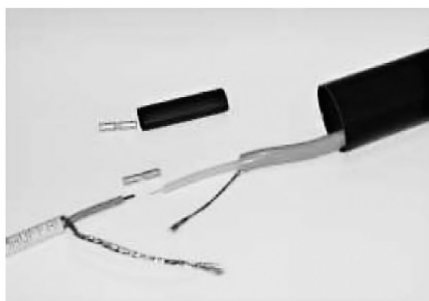
**9** Pull the outer heat shrink tubing back over one end of the splice and shrink down with hot air gun (start from the center of the splices and work towards both ends). Make sure heat is applied around the tubing and avoid overheating. If tubing starts to get glossy this is a sign of overheating. Stop heating when the outer tubing is tight and some excess sealant protrudes from both ends.

**10** Allow the finished splice to cool down for 5-10 minutes. Now center outer heat shrink tubing over the finished inner shrink and repeat step 9.

Cool again for 5-10 minutes, then measure insulation, total resistance and continuity.



## Splice/Field Repair Installation Overview



**NOTE:** Cold leads included in this kit are RWU90 wires, approved for direct concrete burial. If the damaged cable is longer than 6", it's ok to have a portion of cold leads exposed between two outer heat shrinks, as long as the actual connection points are completely insulated.

**SAFETY GUIDELINES:** The heating cables must be applied in accordance with the applicable specifications and in accordance with the operating data specified by Britech. Maintenance and failure rectification works may only be carried out by qualified electricians. Conformity with all applicable laws and guidelines must be ensured prior to re-commissioning. All applicable safety instructions must be observed prior to the implementation of any maintenance and/or failure rectification works.