

# NELSON HEAT TRACING SYSTEMS

## PLT-BSW MONITOR WIRE SPLICE CONNECTION KIT

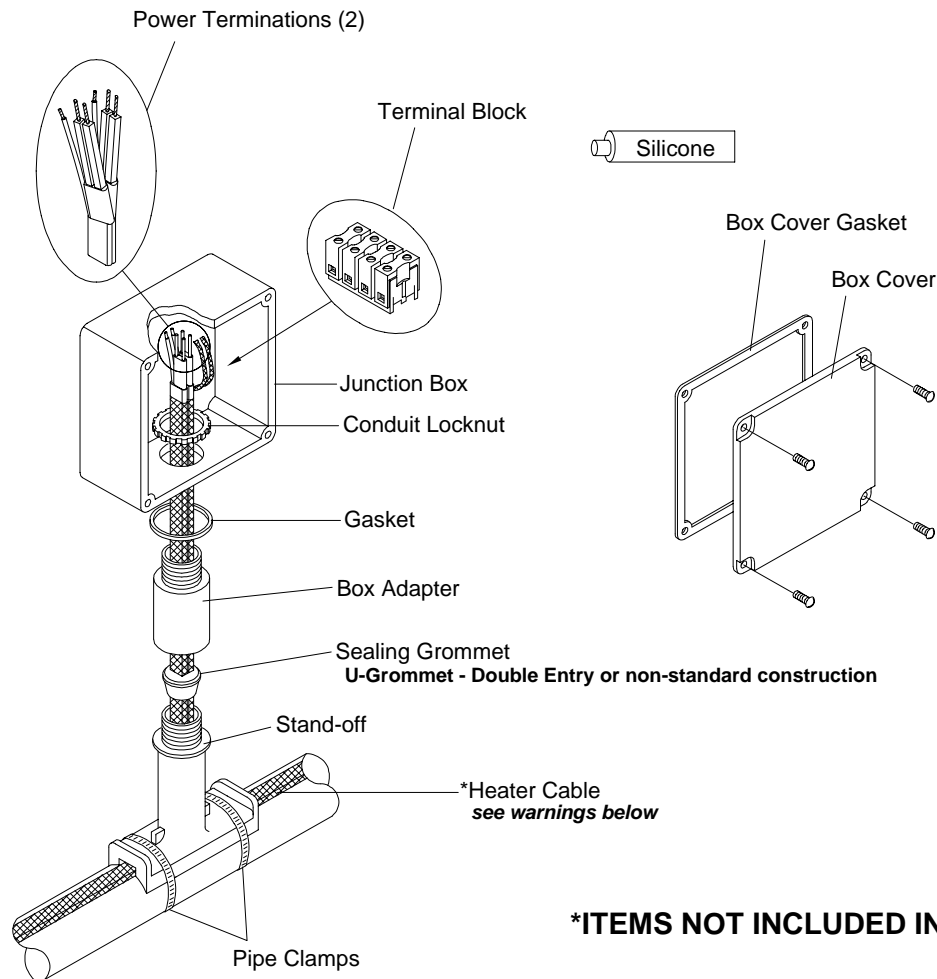
## INSTALLATION INSTRUCTIONS

### DESCRIPTION

The PLT-BSW Monitor Wire Splice Connection Kit is for use with all versions of LT, CLT, HLT and NC heater cables. Compatible for use with any vendors heater cables smaller than 11mm (.44") diameter.

### KIT CONTENTS

1 Junction Box	2 Power Terminations
1 Conduit Locknut	1 Terminal Block
1 Sealing Grommet	1 Gasket
1 Box Adapter	1 Tube of Silicone
2 Pipe Clamps	1 Stand-off



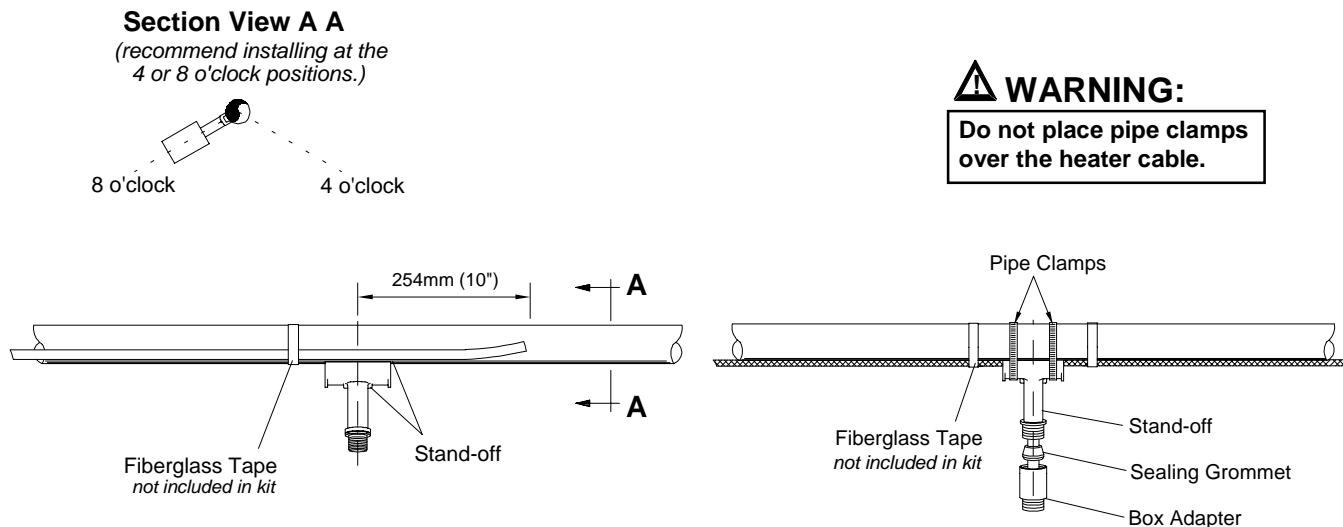
### \*ITEMS NOT INCLUDED IN KIT

**Note:** This detail shows Braided "CB" Products only. For Overjacket "J" or "JT" Products, see diagram on sheet 8.

### **⚠ WARNING:**

- Article 427-22 of the National Electrical Code requires that all heaters shall have metal coverings and be provided with branch circuit ground-fault protection.
- If nuisance tripping of ground fault breakers occurs due to condensation in the junction box, electrical connections should be moisture proofed by use of a coating or

### STAND-OFF POSITIONING



- 1 Mark pipe where stand-off will be mounted. *See drawing above.*
- 2 Push heater cable through bottom opening of stand-off.
- 3 Slide the sealing grommet over the heater cable and position inside stand-off opening:

#### **Braided "CB" Products:**

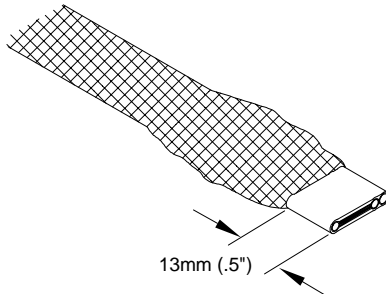
See "Sealing Grommet Installation for Braided "CB" Products", sheet 3.

#### **Overjacket "J" or "JT" Products**

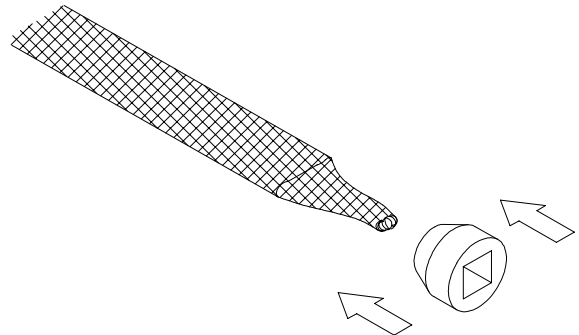
Proceed with step 4 below.

- 4 Apply silicone around the heater cable on top of the sealing grommet and fill any voids in sealing grommet.
- 5 Slide the box adapter over the heater cable and tighten securely to stand-off.
- 6 Prepare heater cable for power termination:  
Braided "CB" Products, see sheet 3.  
Overjacket "J" or "JT" Products, see sheet 4.
- 7 Terminate heater cable, see sheet 7.

### SEALING GROMMET INSTALLATION FOR BRAIDED "CB" PRODUCTS

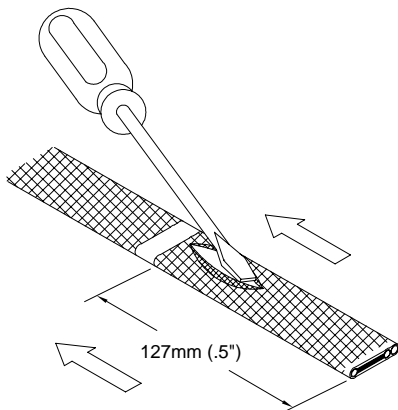


- 1 Slide braid back, allowing at least 13mm (.5") of heater cable exposed.
- 2 Cut and remove the exposed heater cable.

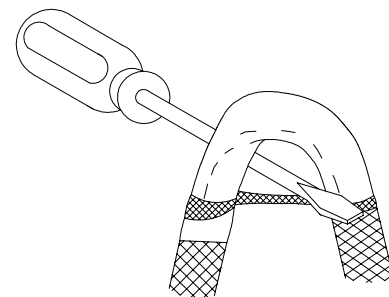


- 3 Slide braid back over heater cable and twist excess braid into a pigtail.
- 4 Slide the sealing grommet over the heater cable and position inside stand-off opening.
- 5 Continue with step 4 on sheet 2.

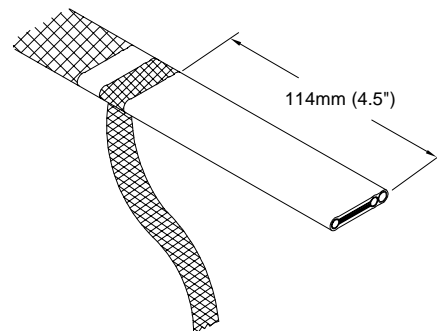
### BRAIDED "CB" PRODUCTS



- 1 Secure heater cable braid with fiberglass tape, allowing 127mm (5") of cable for stripping.
- 2 Slide braid back towards the fiberglass tape creating a bulge.
- 3 At the bulge, separate the braid to make an opening.

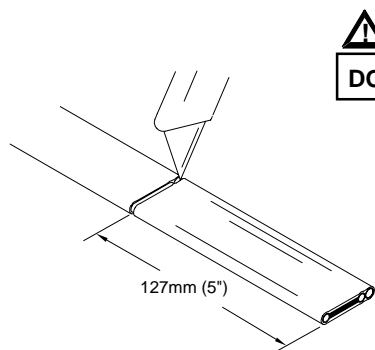


- 4 Bend heater cable and work it through the braid opening.



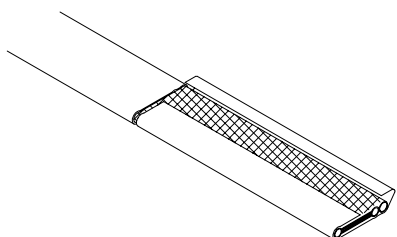
- 5 Pull the braid tight.
- 6 Proceed to "LT, CLT & HLT Products", sheet 5.

### OVERJACKET "J" or "JT" PRODUCTS

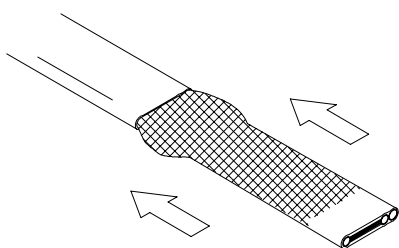


**⚠ WARNING:**  
**DO NOT CUT BRAID**

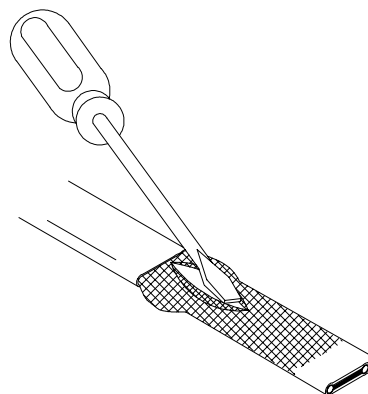
- 1 Lightly cut around heater cable overjacket 127mm (5") from the end. Bend cable to break the overjacket.
- 2 Lightly cut the overjacket up the center between first cut mark and the cable end. Bend cable to break the overjacket.



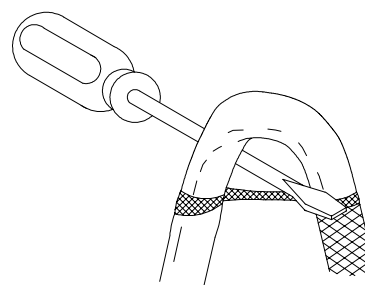
- 3 Remove heater cable overjacket from cable.



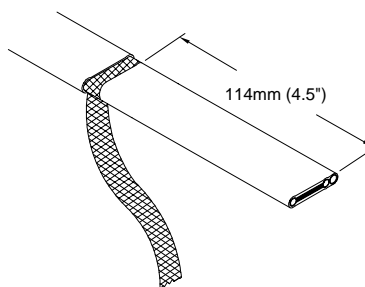
- 4 Move heater cable braid back toward cable overjacket, creating a bulge.



- 5 At the bulge, separate the braid to make an opening.



- 6 Bend the heater cable and work it through the braid opening.



- 7 Pull the braid tight.
- 8 Proceed to "LT, CLT & HLT Products", sheet 5.

# NELSON HEAT TRACING SYSTEMS

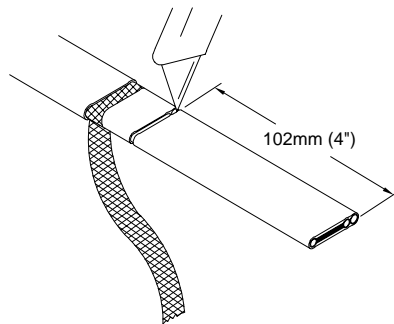
## PLT-BSW MONITOR WIRE SPLICE CONNECTION KIT

# INSTALLATION INSTRUCTIONS

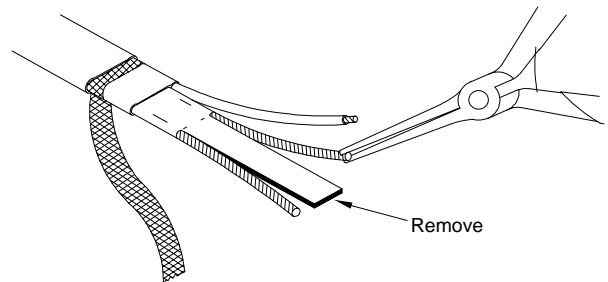
### FOR ALL NELSON LT, CLT & HLT PRODUCTS

(See sheet 6 for an alternate stripping method for HLT products.)

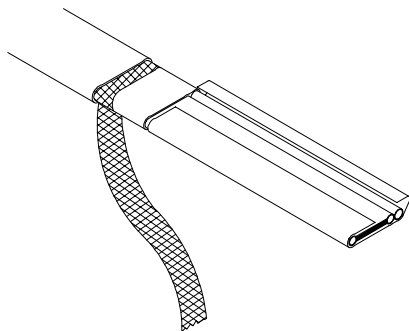
**⚠ WARNING:**  
**DO NOT CUT CORE MATERIAL**



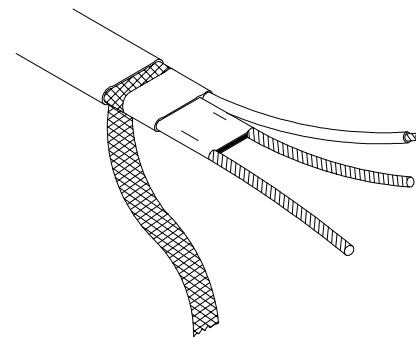
- 1 Lightly cut around heater cable outer jacket 102mm (4") from the end. Bend cable to break outer jacket.
- 2 Lightly cut the outer jacket up the center between the first cut mark & the cable end. Bend cable to break outer jacket.



- 6 Starting at the end, pull each bus wire away from the core material.
- 7 Remove exposed core material.

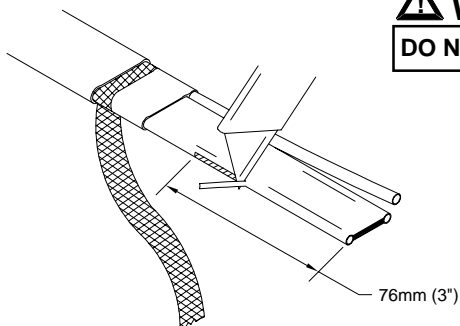


- 3 Remove the outer jacket from the heater cable.



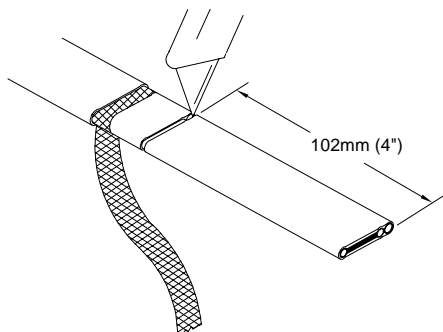
- 8 Cut 6mm (0.25") off the end of each bus wire.
- 9 Straighten each bus wire to a pointed end.
- 10 Proceed to "Power Termination", sheet 7.

**⚠ WARNING:**  
**DO NOT CUT BUS WIRES**

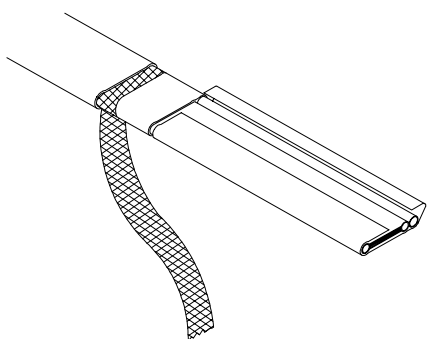


- 4 Shave 76mm (3") of core material from the outside of each cable bus wire.
- 5 Shave 12mm (.5") of white insulation from the end of the monitor wire.

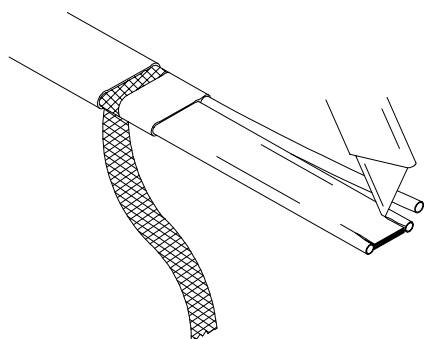
### HLT PRODUCTS ALTERNATE STRIPPING METHOD



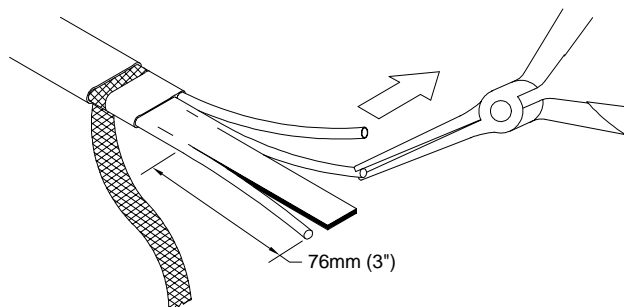
- 1 Lightly cut around cable outer jacket 102mm (4") from the end. Bend cable to break outer jacket.
- 2 Lightly cut the outer jacket up the center between the first cut mark & the cable end. Bend cable to break outer jacket.



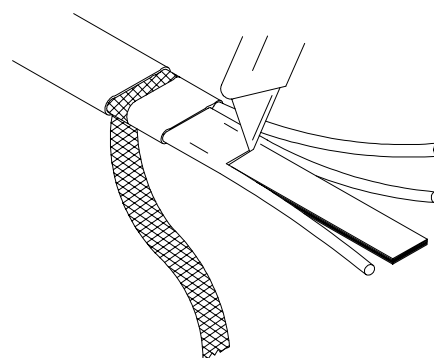
- 3 Remove the jacket from the heater cable.



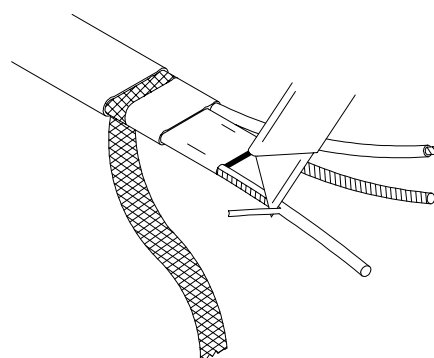
- 4 Make a cut inside each bus wire.



- 5 Starting at the end, in the same plane as the cable, pull 76mm (3") of bus wire away from each side of the core material.



- 6 Remove the exposed core material.

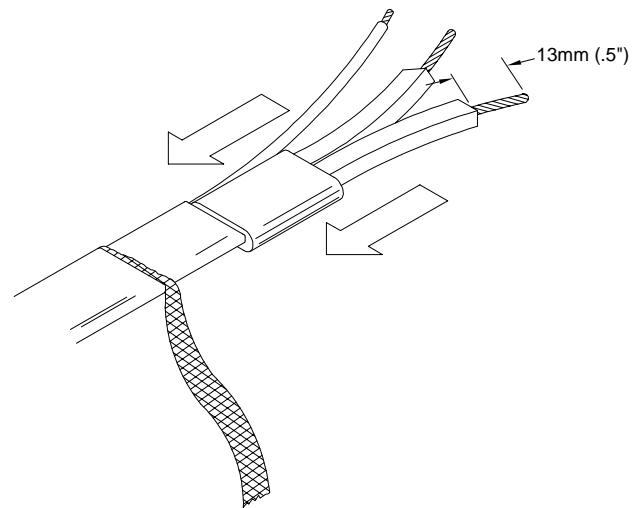
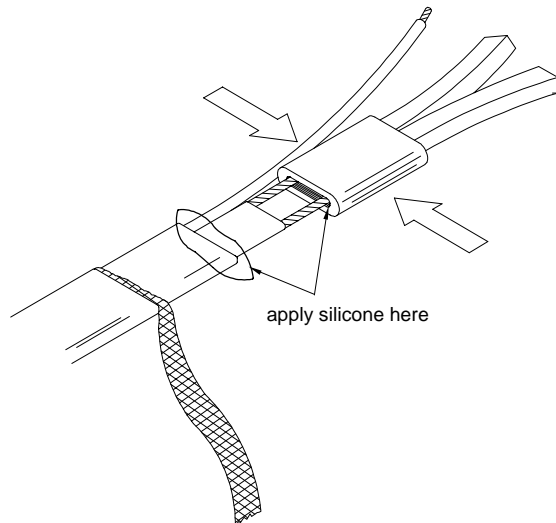


- 7 Remove the remaining core material off the outside of each bus wire then cut 6mm (0.25") off the end of each bus wire.
- 8 Shave 12mm (.5") of white insulation from the end of the monitor wire.
- 9 Straighten each bus wire to a pointed end.
- 10 Proceed to "Power Termination", sheet 7.

**POWER TERMINATION**

**⚠ WARNING:**

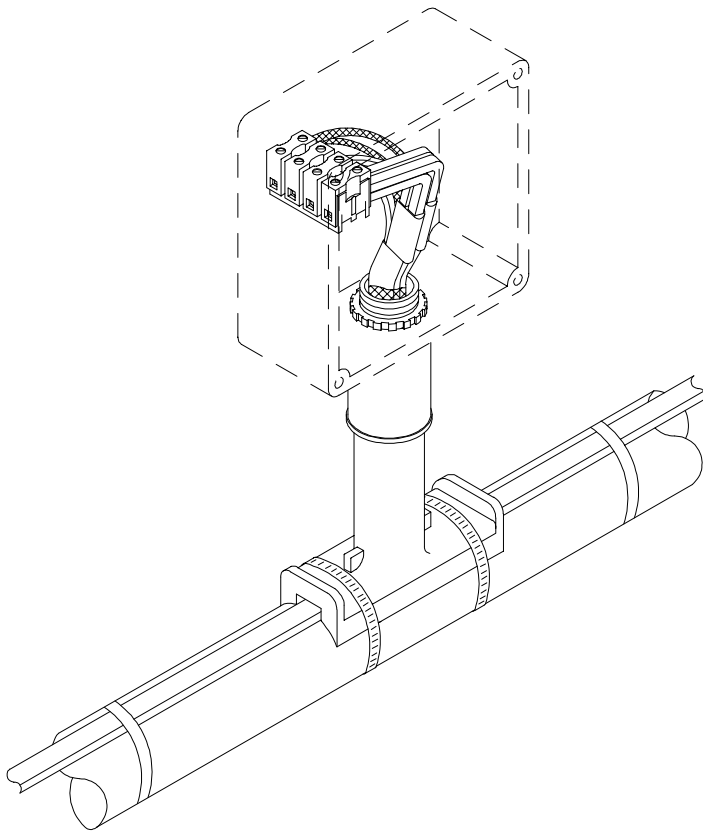
Bus wires must not touch or cross while inserting into power termination.



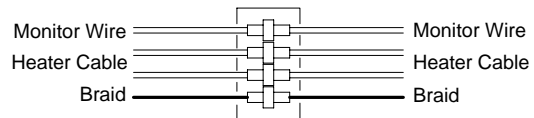
- 1 Insert bus wires into power termination.
- 2 Squeeze power termination opening and fill with silicone.
- 3 Starting at the outer jacket interface, apply amply amount of silicone around the exposed core material and monitor wire.

- 4 Slide power termination over the bus wires until it meets up against the outer jacket interface.
- 5 The silicone will set up in about 30 minutes with a complete cure after 24 hours.
- 6 Proceed to "Power Connection", sheet 8.

**POWER CONNECTION**



**Terminal Block Connection**



**Note:** This detail shows Overjacket “J” or “JT” Products only. For Braided “CB” Products see diagram on sheet 1.

- ❶ Place gasket onto the box adapter.
- ❷ Position junction box onto the box adapter and secure it with the conduit locknut.
- ❸ Connect bus wires, ground braid and monitor wire to terminal block. See “Terminal Block Connection” above.
- ❹ Secure the box cover onto junction box.