

# NELSON™ HEAT TRACING SYSTEMS

## Z1-ALT-BS-M25/-75NPT SPLICE CONNECTION KIT

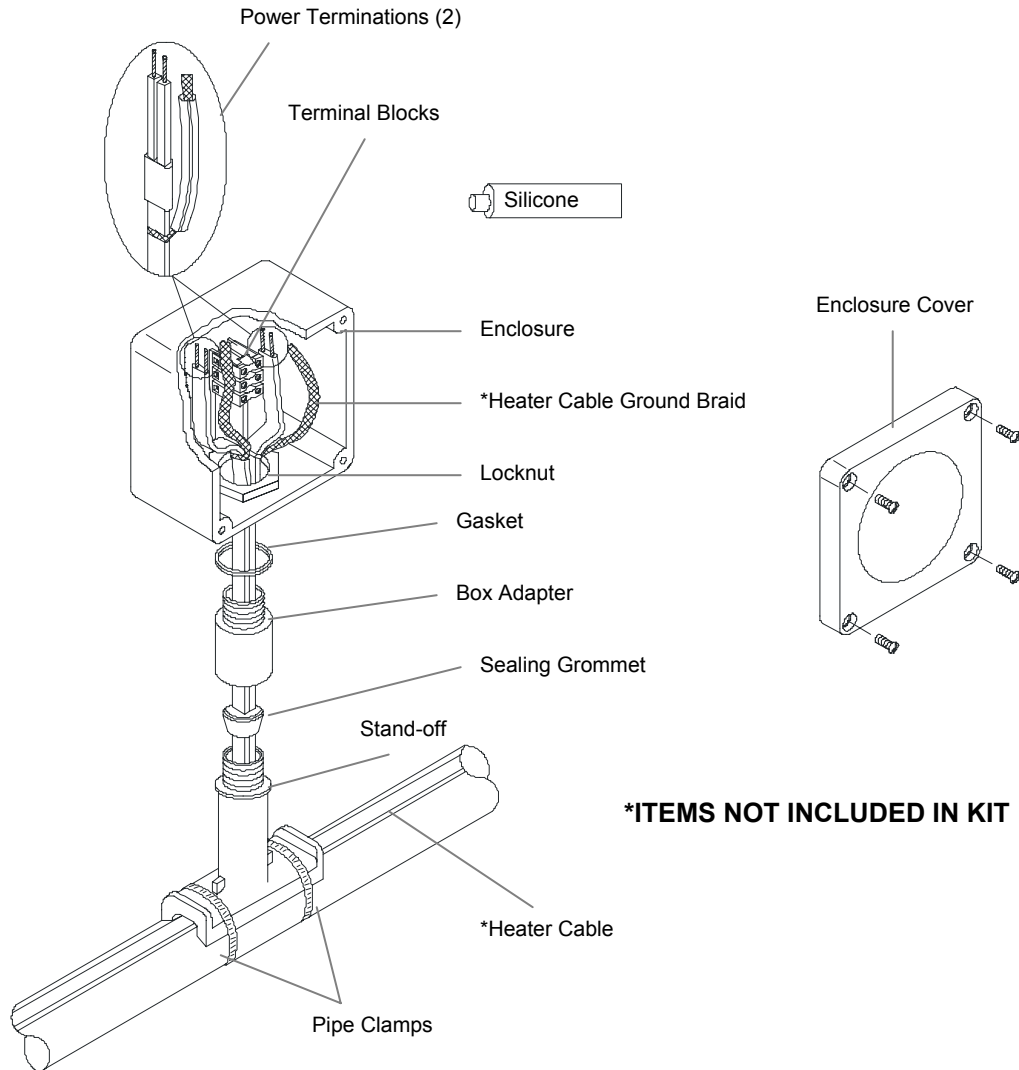
### INSTALLATION INSTRUCTIONS

#### DESCRIPTION

The Z1-ALT-BS Splice Connection Kit is designed for splicing two heater cables in an in-line configuration. This kit is designed for use with all wattages of Nelson Heat Tracing Systems' LT-J, LT-JT and HLT-J heater cables. The Z1-ALT-BS-M25 provides compatibility to M25 metric thread standard and the Z1-ALT-BS-75NPT provides compatibility to 0.75" NPT thread standard.

#### KIT CONTENTS

1 Enclosure	1 Sealing Grommet
2 Power Terminal Blocks	2 Power End Termination, 101.6mm (4.0")
1 Ground Terminal Block	2 G/Y Tubing, 9.5mm (0.38") diameter, 152mm (6") length
1 Stand-off	1 Tube of Silicone
1 Box Adapter	
1 Locknut	



#### **⚠ WARNING:**

If nuisance tripping of ground fault breakers occurs due to condensation in the enclosure, electrical connections should be moisture proofed by use of a coating or sealant.

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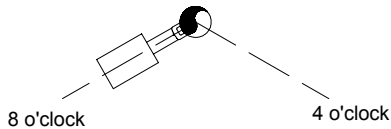
## Z1-ALT-BS-M25/-75NPT SPLICE CONNECTION KIT

### INSTALLATION INSTRUCTIONS

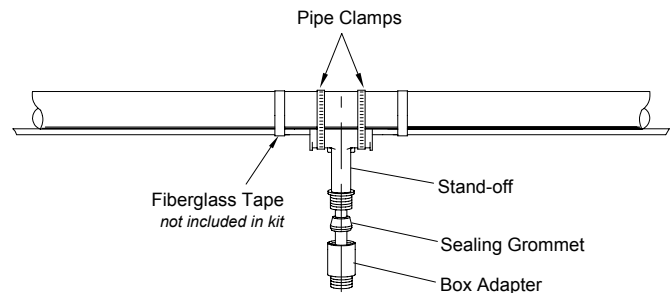
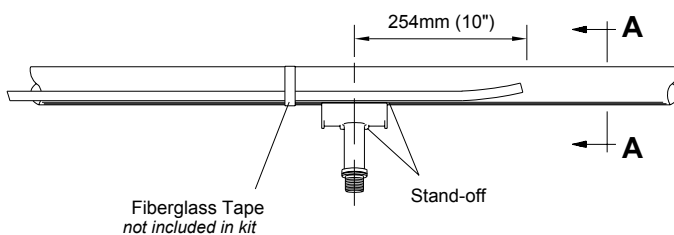
#### STAND-OFF POSITIONING

##### Section View A A

(recommend installing at the  
4 or 8 o'clock positions)



**⚠ WARNING:**  
Do not place pipe clamps  
over heater cable.



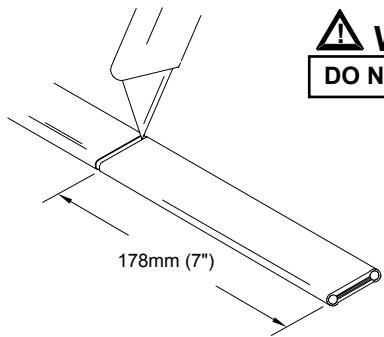
- 1) Mark pipe where stand-off will be mounted. See diagram above.
- 2) Push both heater cables through the bottom opening of stand-off.
- 3) Place stand-off on the pipe and fasten with pipe clamps.
- 4) Slide the sealing grommet over both heater cables and position inside stand-off opening.
- 5) Apply silicone around the heater cables on top of the sealing grommet and fill any voids in sealing grommet.
- 6) Slide the box adapter over both heater cables and tighten securely to stand-off.
- 7) Prepare both heater cables for power termination. Proceed to sheet 3.

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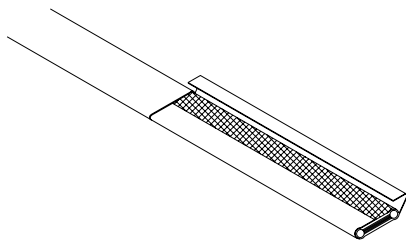
INSTALLATION  
INSTRUCTIONS

### HEATING CABLE PREPARATION FOR NELSON LT-J, LT-JT & HLT-J PRODUCTS

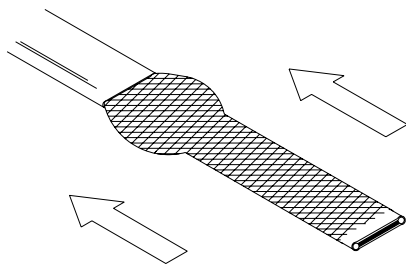


**⚠ WARNING:**  
**DO NOT CUT BRAID**

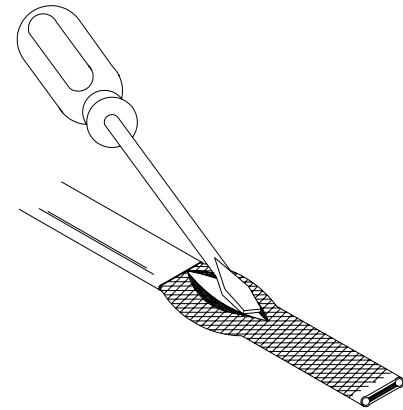
- 1) Lightly cut around heater overjacket 178mm (7") from the end. Bend cable to break the overjacket.
- 2) Lightly cut overjacket up the center between first cut mark and the cable end. Bend cable to break overjacket.



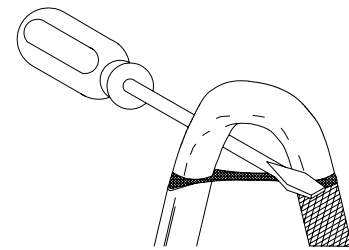
- 3) Remove overjacket from heater cable.



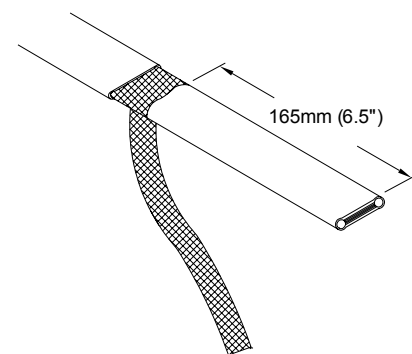
- 4) Move braid back toward the overjacket, creating a bulge.



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



- 6) While bending the heater cable, work it through the braid opening.



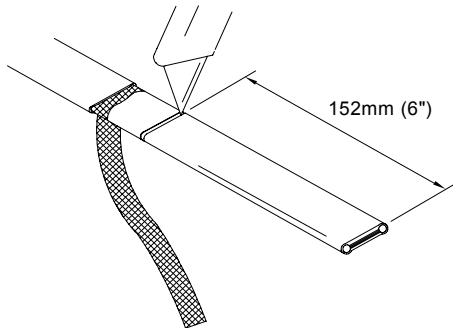
- 7) Pull the braid tight.
- 8) Proceed to sheet 4.

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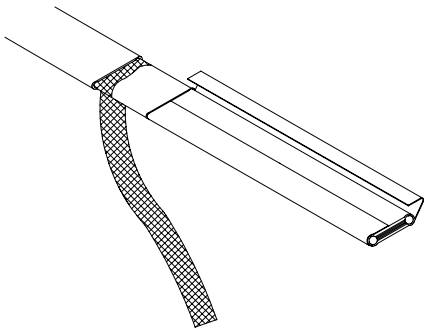
## Z1-ALT-BS-M25/-75NPT SPLICE CONNECTION KIT

INSTALLATION  
INSTRUCTIONS

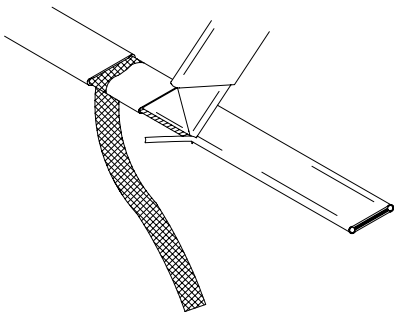
### HEATING CABLE PREPARATION FOR NELSON LT-J, LT-JT & HLT-J PRODUCTS



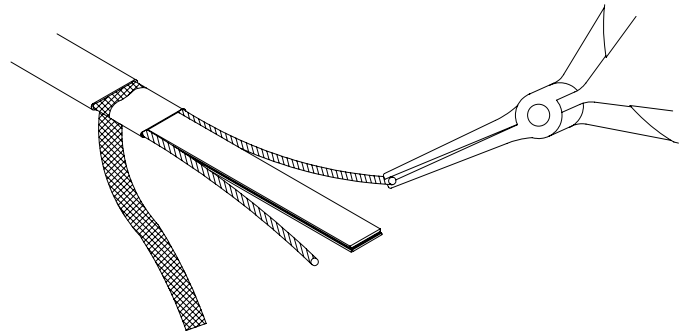
- 1) Lightly cut around cable outer jacket 152mm (6") from the end. Bend cable to break outer jacket.
- 2) Lightly cut the outer jacket up the center between the first cut mark & the cable end. Bend cable to break outer jacket.



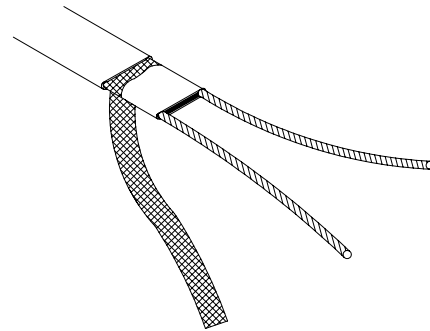
- 3) Remove the jacket from the heater cable.



- 4) Shave the core material from the outside of each bus wire.



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



- 7) Cut 6mm (0.25") off the end of each bus wire.
- 8) Proceed to sheet 5.

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

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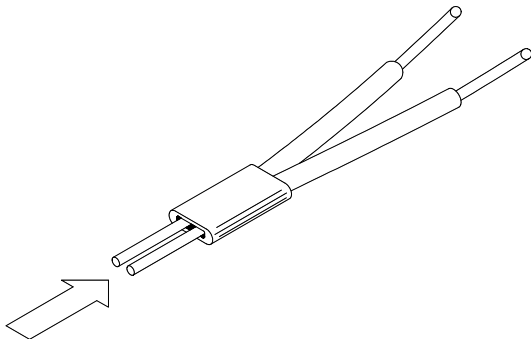
## Z1-ALT-BS-M25/-75NPT SPLICE CONNECTION KIT

INSTALLATION  
INSTRUCTIONS

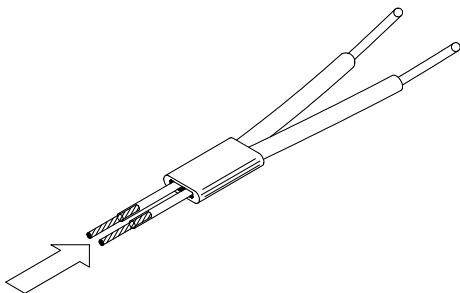
### POWER TERMINATION FOR NELSON LT-J, LT-JT & HLT-J PRODUCTS

#### WARNINGS

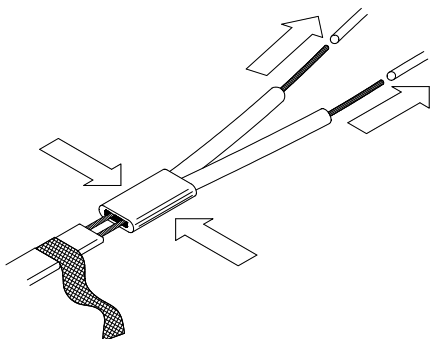
- Bus wires must not touch or cross while inserting into power termination.
- Only power terminations / end seals specifically approved for the vendors' style and type of heater cable must be used.



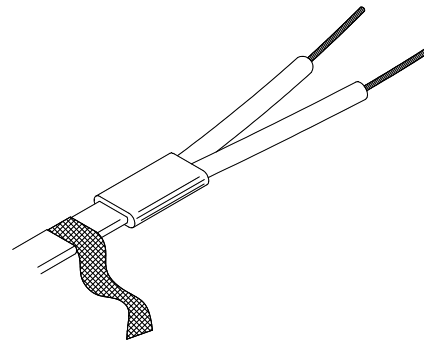
1) Insert bus wires into power termination.



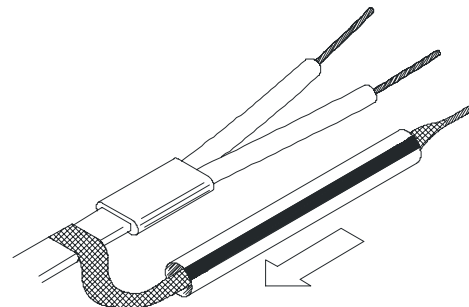
2) Insert bus wires into guide tubes.



- 3) Remove guide tubes.  
4) Squeeze power termination opening and fill with silicone.



- 5) Push power termination to overlap jacket.  
6) The silicone will set up in about 30 minutes with a complete cure after 24 hours.



- 7) Slide green/yellow tubing over ground braid before terminating heater to customer supplied terminals.

#### WARNING:

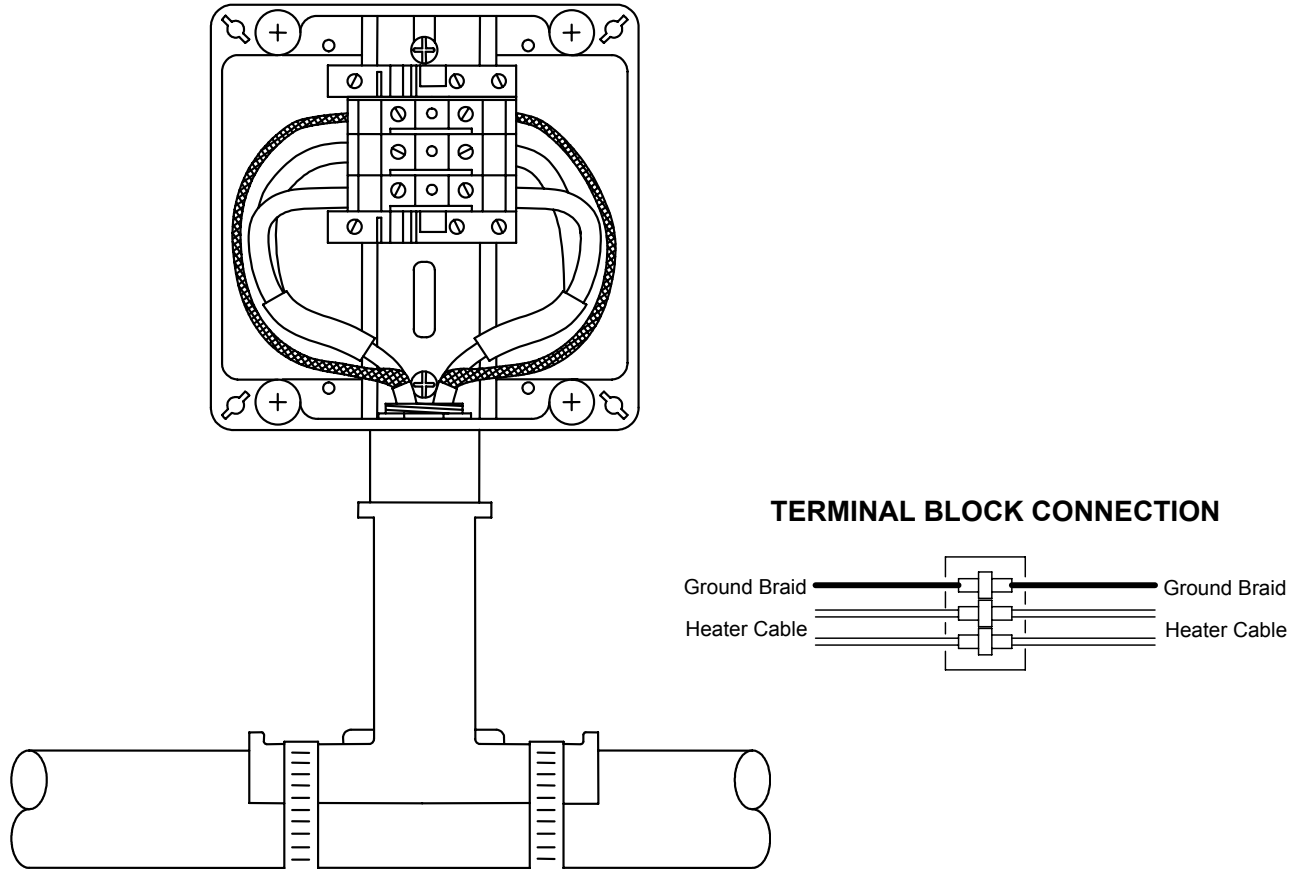
- Do not megger or hi-pot until silicone is completely cured.
- Braid must be kept away from bus wires or shorting will occur.

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INSTALLATION  
INSTRUCTIONS

### POWER CONNECTION FOR NELSON LT-J, LT-JT & HLT-J PRODUCTS



- 1) Place gasket on box adapter.
- 2) Position enclosure on box adapter and apply silicone around the locknut before securing.
- 3) Connect bus wires and ground braid from both heater cables to the terminal block. See diagram above.
- 4) Push all wires and terminal block inside the enclosure.
- 5) Place the cover onto the enclosure.

Nelson Heat Tracing Systems products are supplied with a limited warranty. Complete Terms and Conditions may be found on Nelson's website at [www.nelsonheaters.com](http://www.nelsonheaters.com).