

TSRT

TSRT Tee Splice Kit Installation Instructions

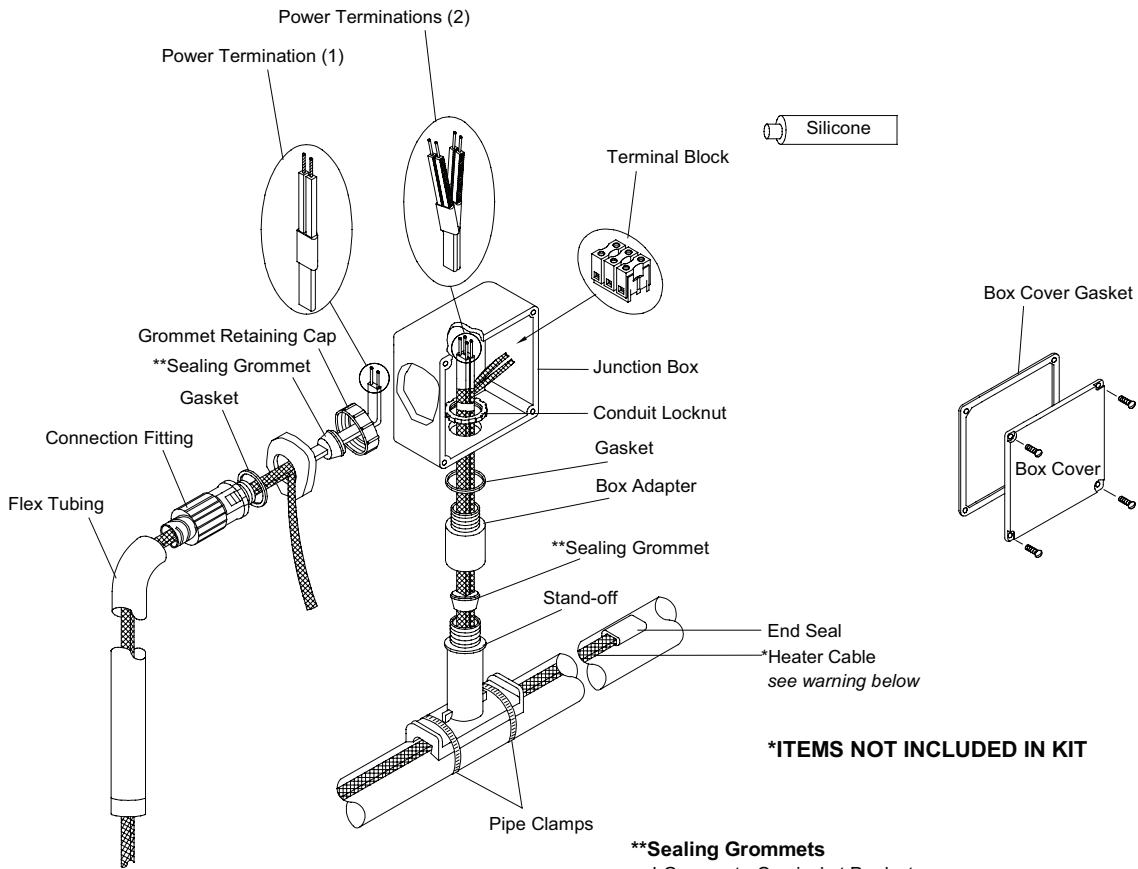
Description

The TSRS Splice Connection Kit is for use with all versions of EasyHeat's self regulating heater cables smaller than 0.44" (11mm) in diameter. It is also compatible with any other manufacturer's heating cables that fit the size specification. This kit contains materials to make 1 tee splice and 2 end seals.

Kit Contents

- 1 Junction Box
- 1 Terminal Block
- 1 Conduit locknut
- 2 Sealing Grommet
- 1 Stand-off
- 1 Flex Tubing
- 1 Uninsulated Splice Connector

- 2 Warning Labels
- 3 Power Terminations
- 1 Box adapter
- 2 Gasket
- 2 End Seals
- 1 Connection Fitting
- 1 Grommet Retaining Cap
- 1 Tube of Silicone
- 2 Pipe Clamps



***ITEMS NOT INCLUDED IN KIT**

**Sealing Grommets

- J-Grommet - Overjacket Products
- B-Grommet - Base Products
- U-Grommet - Double Entry or non standard construction
(For dual connections 1 additional power termination and end seal will be included in this kit.)

⚠ WARNINGS!

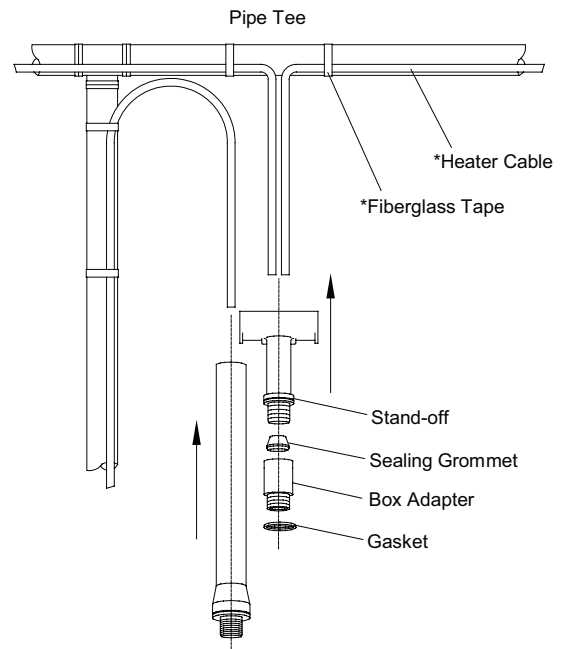
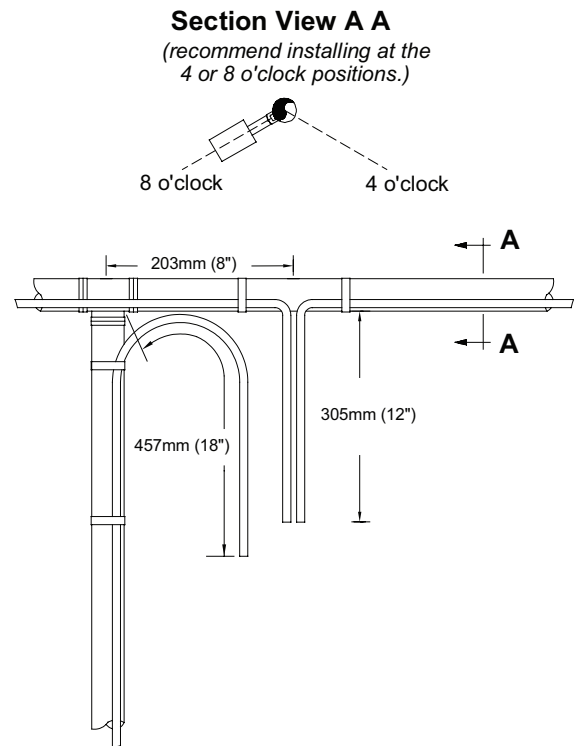
- Article 427 of the National Electrical Code requires that all heaters shall have grounded metal coverings and branch circuit may require ground-fault protection.
- If nuisance tripping of ground fault breakers occurs due to condensation in the junction box, electrical connections should be moisture-proofed by suitable means!
- Minimum installation temperature -40°C (-40°F)

Cable Termination

1. Cut heater cables to lengths shown.
2. Push the two 12" (305mm) length heater cables through the bottom opening of stand-off.
3. Place stand-off on pipe and fasten with pipe clamps.
4. Slide the large opening sealing grommet over the two heater cables and position inside stand-off opening.
5. Apply silicone around the heater cables at top of sealing grommet and fill any voids in sealing grommet.
6. Slide the box adapter over the two heater cables and tighten securely to stand-off.
7. Install the flex tubing over the 18" (457 mm) length heater cable, tape at pipe tee with fiberglass tape.
8. Slide the small opening sealing grommet over the single heater cable and position inside the connection fitting.
9. Apply silicone around the heater cables at top of sealing grommet and fill any voids in sealing grommet.
10. Prepare heater cables for power termination according to cable stripping procedures.
11. Compare the electrical circuit according to the wiring connection procedures.

⚠ WARNING!

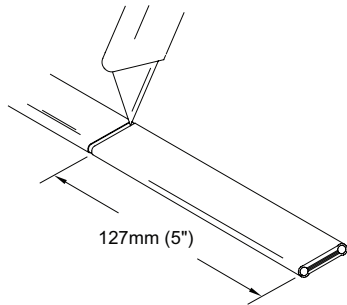
- Do not place pipe clamps over the heater cable



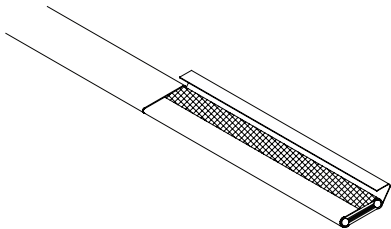
Cable Stripping Procedure

FOR CABLES WITHOUT OVERJACKET (BRAID ONLY), PROCEED DIRECTLY TO STEP 4.

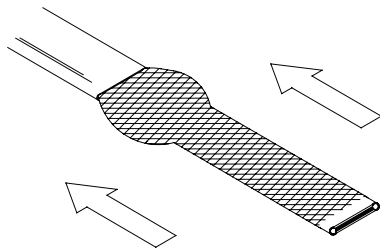
1. Lightly cut around heater overjacket 5" (127mm) from the end. Bend cable to break overjacket.



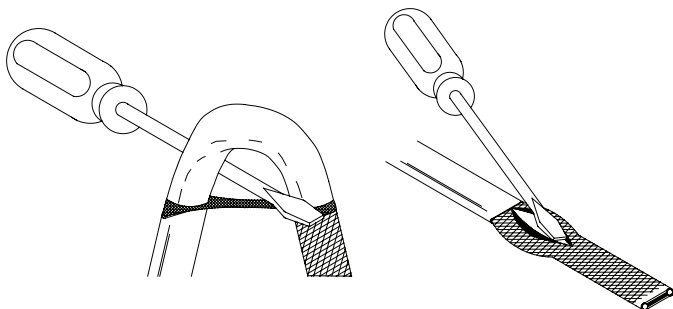
2. Lightly cut overjacket up the center between first cut mark and the cable end. Bend cable to break overjacket.



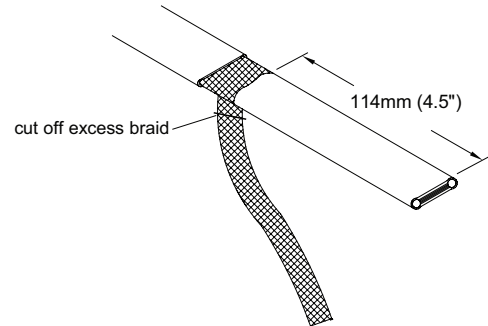
3. Remove overjacket from the heater cable.
4. Move braid back toward the overjacket, creating a bulge. (For cables without an overjacket, apply a ring of electrical tape 5" from the end of the cable. Then move braid back towards the tape creating a bulge).



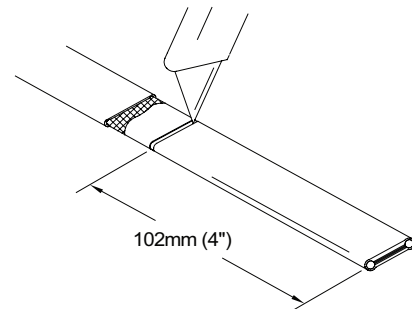
5. At bulge, separate the braid to make an opening.
6. While bending the heater cable, work it through the braid opening.



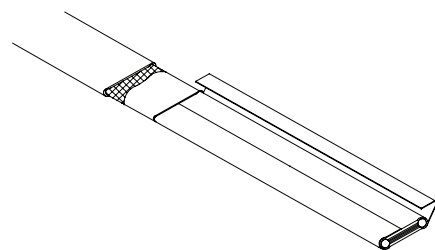
7. Pull the braid tight.



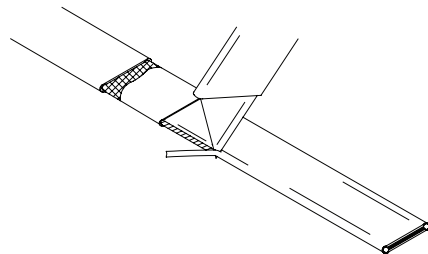
8. Lightly cut around heater jacket 4" (102mm) from the end. Bend cable to break outer jacket.



9. Lightly cut the outer jacket up the center between the first cut mark and the cable end. Bend cable to break outer jacket.
10. Remove the jacket from the heater cable.

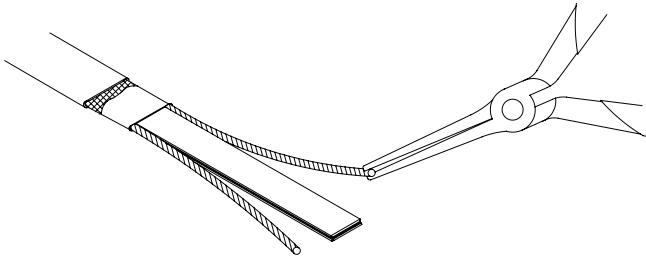


11. Shave the core material from the outside of each bus wire.



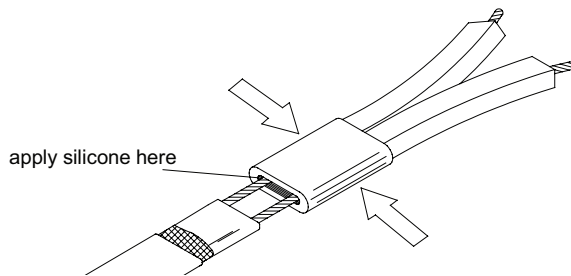
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12. Starting at the end, pull each bus wire away from the core material.



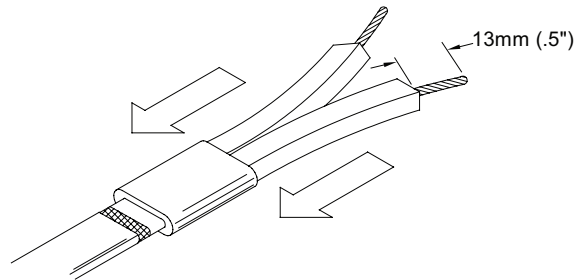
13. Remove exposed core material.

14. Insert bus wires into power termination.



15. Squeeze power termination opening and fill with silicone.

16. Push power termination opening and fill with silicone.



⚠ WARNING!

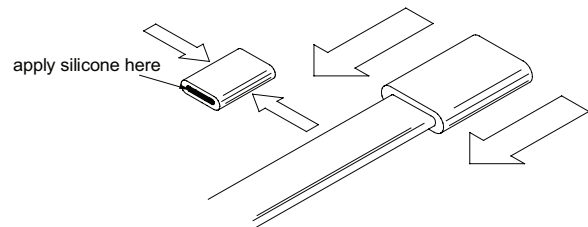
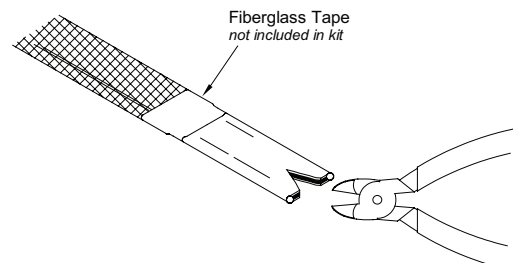
- Do not cut or nick braid
- Do not cut or nick wires
- Bus wires must not touch or cross while inserting into power termination/end seal.
- Only power terminations/end seals specifically approved for the vendor's style and type of heater cable must be used.

Cable Termination

1. Remove 0.5" (13mm) of overjacket exposing the braid. Then remove the 0.5" (13mm) of exposed braid.
2. Make a 0.4" (10mm) cut at the end of the heater cable.
3. Squeeze end seal and fill with silicone.
4. Push and seal over the heater cable.
5. The silicone will set up in about 30 minutes with a complete cure after 24 hours.

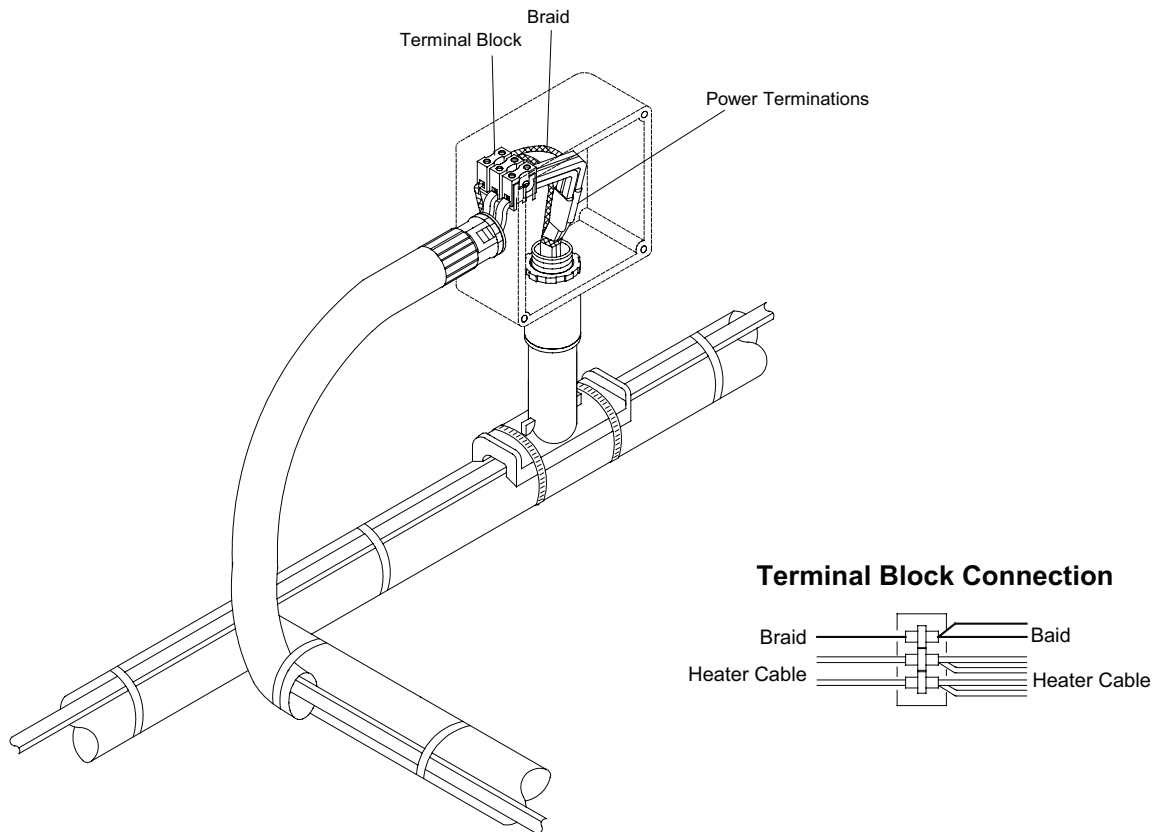
⚠ WARNING!

- *Not sure what this says*
- Braid must be kept away from bus wire or shorting will occur



Wiring Connection

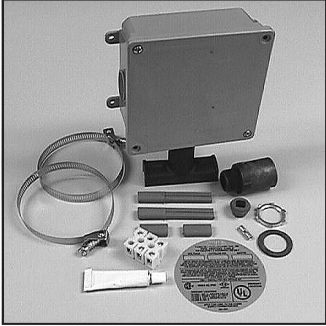
1. Place gasket onto the box adapter.
2. Position junction box onto the box adapter and secure it with the conduit locknut.
3. Place gasket on the flex tubing assembly and connect to junction box with the grommet retaining cap.
4. Connect bus wires and ground braid from all heater cables to the terminal block. See diagram.
5. Apply silicone at point braid leaves the overjacket.
6. Place all wires, cables and terminal block inside junction box.
7. Place the box cover and box cover gasket onto junction box.



General Information

Easy Heat TSR Cable connection kits are provided in nonmetallic NEMA 4X enclosures for use in pipe tracing applications in ordinary locations and Division 2 hazardous areas when used with Easy Heat TSR Cable. These kits contain all necessary components to terminate/connect TSR Cable and any associated power supply.

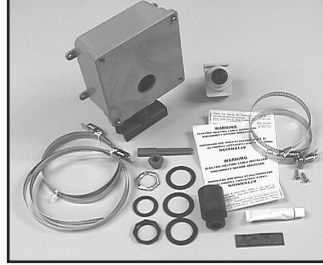
TSRP Power Connection Kit



The TSRP Power Connection Kit is suitable for connecting up to two heating cables to customer supplied power wiring. Seals for up to 2 cable ends are also provided. Models: TSRP3, TSRP12, TSRP20.

- 1 Universal Base, Box Adaptor, Sealing Gasket, Locknut Assembly
- 1 Nonmetallic Junction Box with Cover and Sealing Gasket
- 1 Sealing Grommet
- 2 Power Terminations
- 2 Cable End Seals
- 1 Tube Adhesive Sealant
- 1 3-point Floating Terminal Block
- 1 Ground Connection Splice
- 2 Stainless Steel Pipe Clamps: TSRP3, 3"; TSRP12, 12"; TSRP20, 20"
- 1 Label

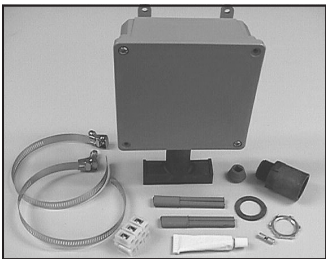
TSRT Tee Connection Kit



The TSRT Tee Connection Kit is designed for connecting heating cables in a tee splice configuration. Seals for up to 2 cable ends are also provided.

- 1 Universal Base, Box Connector, Sealing Gasket, Locknut Assembly
- 1 Nonmetallic Junction Box with Cover and Sealing Gasket
- 1 Watertight Connection Fitting with 12" Hi-Temp Flexible Tubing
- 2 Sealing Grommets
- 1 Grommet Retaining Cap
- 3 Power Terminations
- 2 Cable End Seals
- 1 Tube Adhesive Sealant
- 1 3-point Floating Terminal Block
- 1 Ground Connection Splice
- 2 Stainless Steel Pipe Clamps: TSRT3, 3"; TSRT12, 12"; TSRT20, 20"

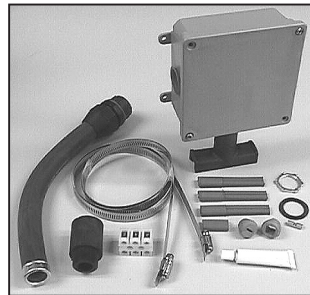
TSRS Splice Connection Kit



The TSRS Splice Connection Kit is designed for connecting two heating cables together in an in-line splice configuration. Models: TSRS3, TSRS12, TSRS20.

- 1 Universal Base, Box Connector, Sealing Gasket, Locknut Assembly
- 1 Nonmetallic Junction Box with Cover and Sealing Gasket
- 1 Sealing Grommet
- 2 Power Terminations
- 1 Tube Adhesive Sealant
- 1 3-point Floating Terminal Block
- 1 Ground Connection Splice
- 2 Stainless Steel Pipe Clamps: TSRS3, 3"; TSRS12, 12"; TSRS20, 20"

TSRL Pilot Light Kits



The TSRL Pilot Light Kits are designed as end-of-circuit indicating light assemblies utilizing low temperature LED lamps. Kits are available for 120V, 208V, 240V and 277V operation.

- 1 Universal Base, Box Connector, Sealing Gasket, Locknut Assembly
- 1 Nonmetallic Junction Box with Cover and Sealing Gasket
- 1 Pilot Light Assembly, 3 Sealing Gaskets, Locknut
- 1 Sealing Grommet
- 1 Power Termination
- 1 Tube Adhesive Sealant
- 2 Stainless Steel Pipe Clamps for pipe size 3 to 12"
- 2 Stainless Steel Pipe clamps for pipe size up to 3"
- 2 Warning Labels
- 1 Caution Label
- 120 Volt model: TSRL112
- 208 Volt model: TSRL812
- 240 Volt model: TSRL212
- 277 Volt model: TSRL712