

TSRP Power Connection Kit Installation Instructions

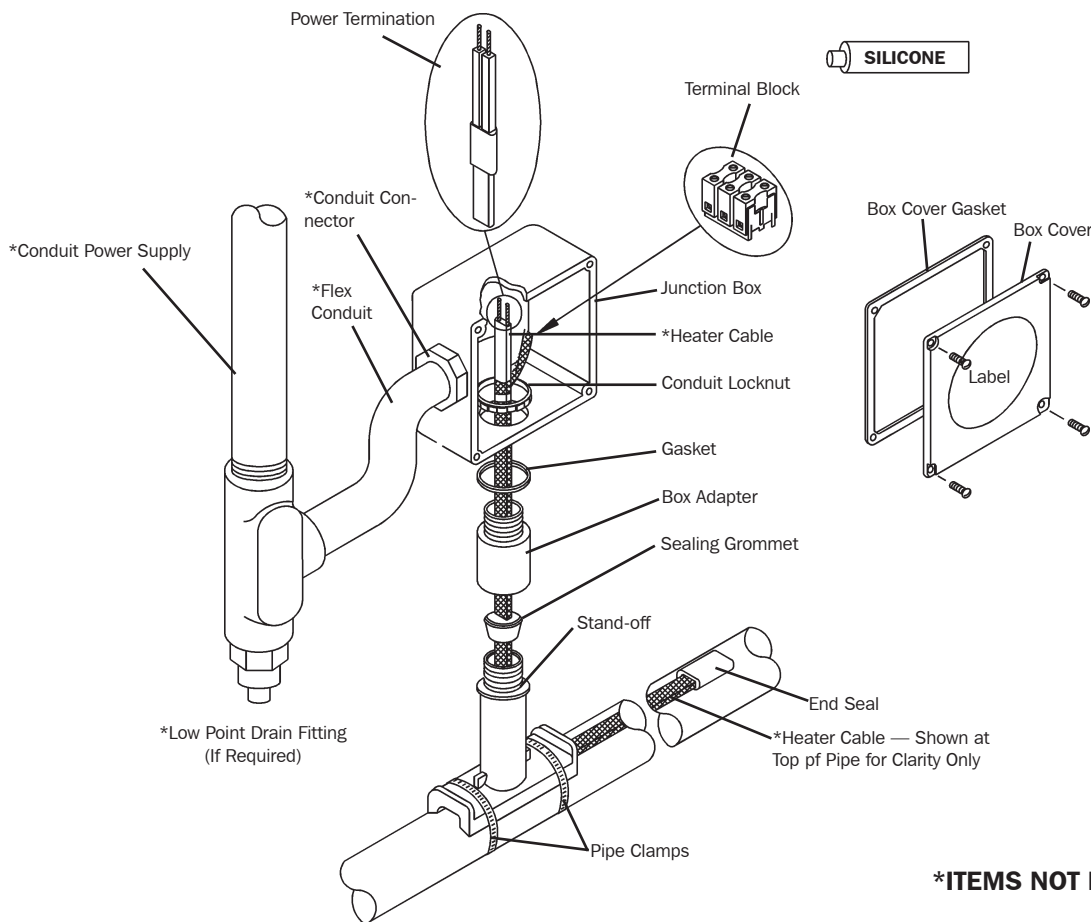
DESCRIPTION

The TSRP Standard Power Connection Kit is for use with all versions of Easy Heat self regulating cables for pipe tracing applications. It is also compatible with any heater cable smaller than 0.44" (11mm) in diameter.

Note: This kit contains materials to connect power to either (1) or (2) heater cables through a common stand-off and junction box.

KIT CONTENTS

- | | |
|--------------------------------|----------------------|
| 1 Junction Box | 2 Power Terminations |
| 2 Warning Labels | 1 Box Adapter |
| 1 Terminal Block | 1 Gasket |
| 1 Conduit Locknut | 1 Tube of Silicone |
| 1 Sealing Grommet | 2 End Seals |
| 1 Stand-off | 2 Pipe Clamps |
| 1 Uninsulated Splice Connector | |



***ITEMS NOT INCLUDED IN KIT**

▲ WARNING!

- Article 250 of the National Electrical Code requires all metallic conduit and fittings terminating at the junction box to be effectively grounded by approved means.
- Article 427 of the National Electrical Code requires that all heaters shall have grounded metal coverings and 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 INSTALLATION

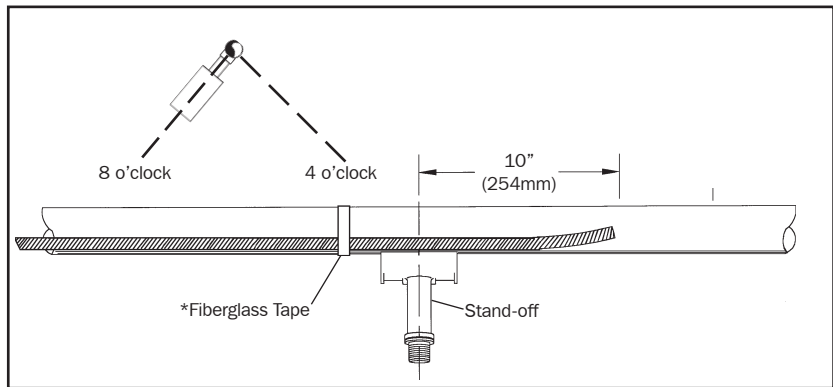
Install cable on pipe in the preferred/recommended orientation(s), in either straight or spiral method according to pipe heat requirements. Secure cable every 24" using 3/4" w. fiberglass tape, NST-2 (or equivalent).

CABLE CONTROL

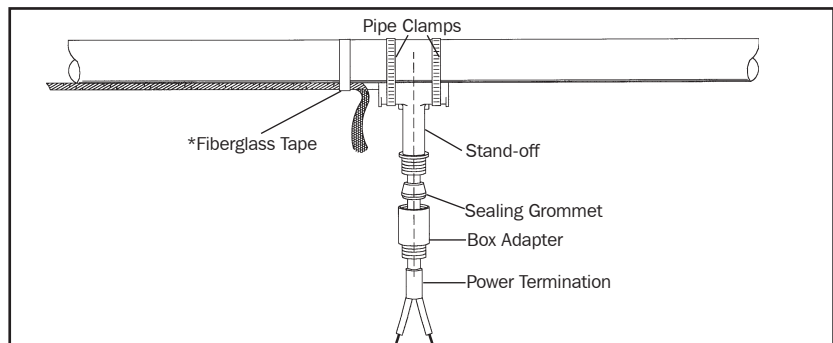
The Easy Heat SR Cables for pipe tracing applications can be controlled in several different ways. The simplest control method is to connect power to the cable at all times; the self regulating characteristic of the cable will ensure that cable power is reduced if heat is not required on the pipe. Alternately, a thermostat can be used to control the cable and maintain the pipe at an appropriate temperature. Contact Easy Heat for additional information.

CABLE TERMINATION

1. Terminate end of cable per end seal directions, Page 4.
2. Mark pipe where stand-off will be mounted and cut cable 10" beyond mark.
3. Push heater cables through the bottom opening of stand-off, allowing 6" (152mm) tail to protrude from threaded end.
4. Place stand-off on the pipe at 4 o'clock or 8 o'clock position and fasten with pipe clamps.
5. Slide the sealing grommet, beveled end first, over the heater cable and position inside stand-off throat.
6. Apply silicon around the heater cable sufficient to fill all voids in sealing grommet.
7. Slide the box adapter over heater cable and tighten securely to stand-off.
8. Prepare heater cable for power termination according to Cable Stripping Procedure, Page 3.
9. Connect power in accordance with Power Connection Procedure, Page 5.



*ITEMS NOT INCLUDED IN KIT



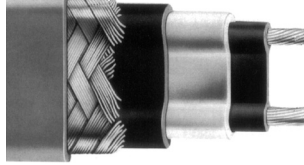
*ITEMS NOT INCLUDED IN KIT

▲ WARNING!
Do not place pipe clamps over the heater cable.

CABLE STRIPPING PROCEDURE

For cables without overjacket (braid only), proceed directly to step 4.

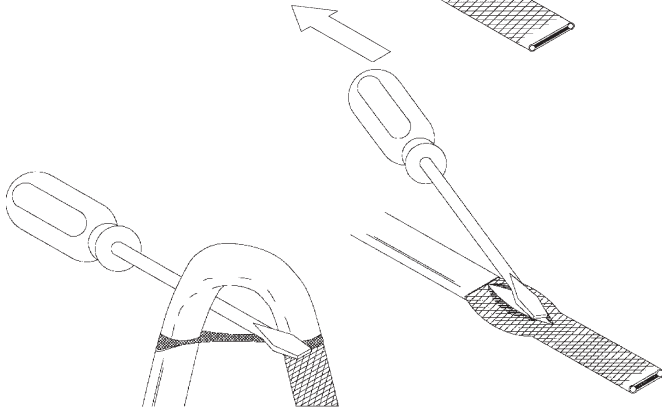
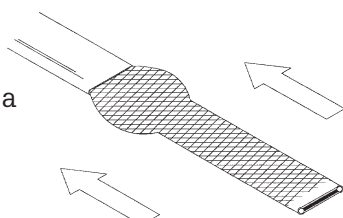
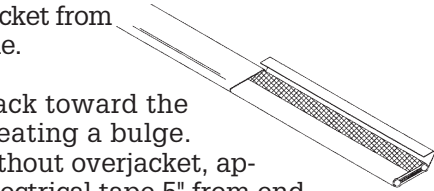
1. Lightly cut around heater overjacket 5" (127mm) from the end. Bend cable to break overjacket.



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

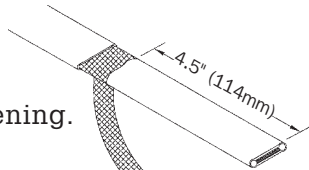
3. Remove overjacket from the heater cable.

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



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

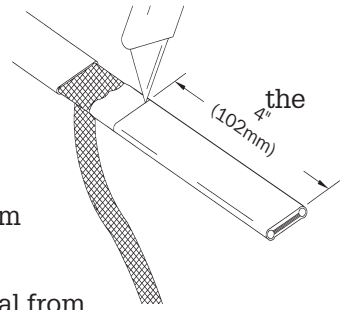
6. While bending the heater cable, work it through the braid opening.



7. Pull the braid tight

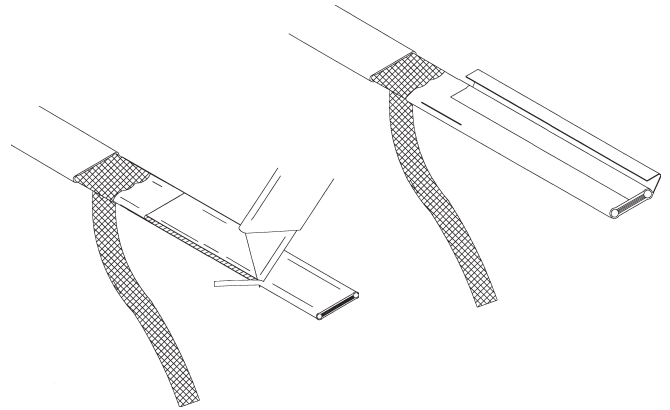
8. With braid prepared as shown, lightly cut around heater jacket 4" (102mm) from the end. Bend cable to break outer jacket.

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



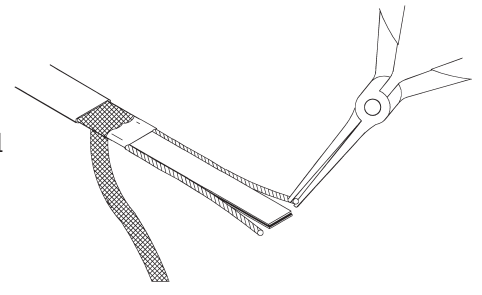
10. Remove the jacket from the heater cable.

11. Shave the core material from



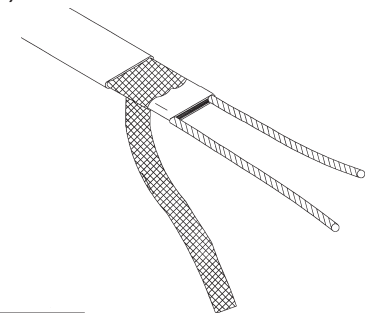
the outside of each bus wire.

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



13. Remove exposed core material.

14. Cut .25" (6mm) off the end of each bus wire.



▲WARNING!
Do not cut or nick braid.

▲WARNING!
Do not cut or nick wires.

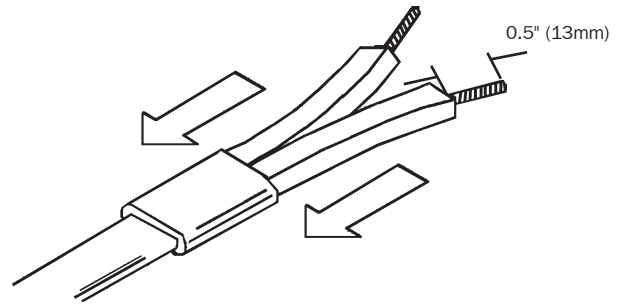
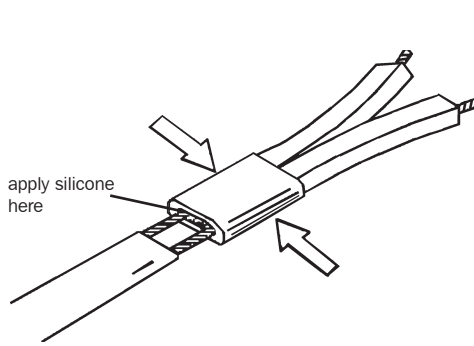
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15. Insert bus wires into power termination.
16. Squeeze power termination ferrule open and fill opening with silicone. (The silicone will set up in about 30minutes with a complete cure after 24 hours.)
17. Push power termination to overlap jacket.
18. Trim bus wires to exposure length shown.

▲ WARNING!

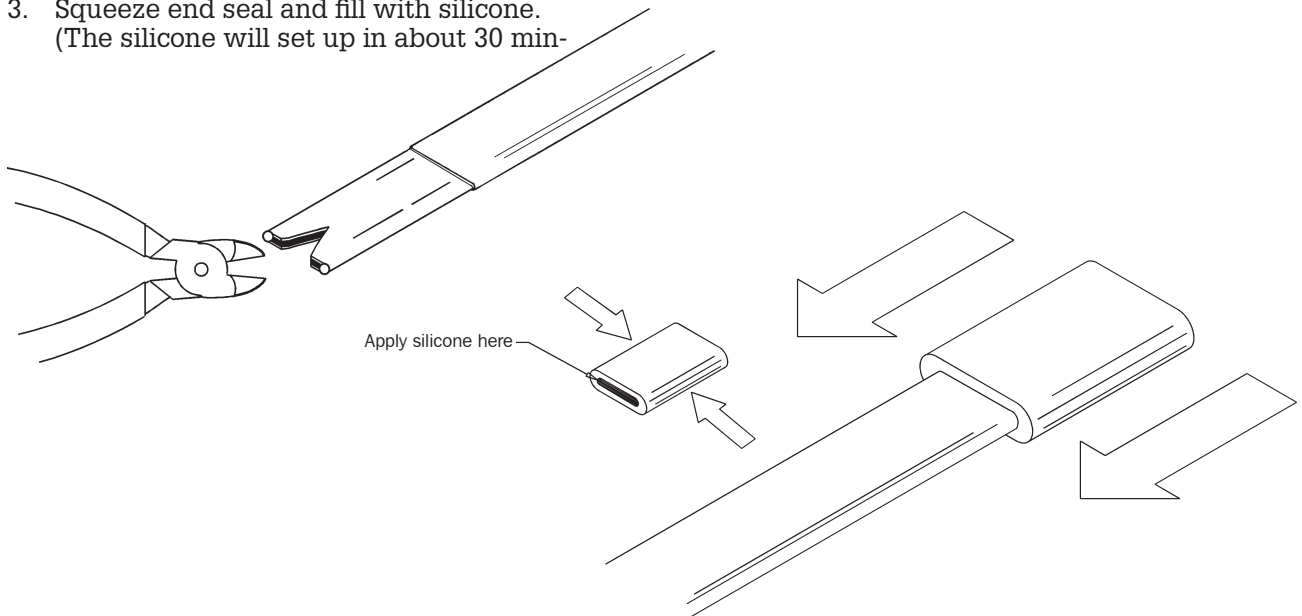
- Bus wires must not touch or cross while inserting into power termination/end seal.
- Only power terminations/end seals specifically approved for the vendor's style and type of heater cable must be used.

END SEAL

1. Remove 0.5" 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. (The silicone will set up in about 30 min-

utes with a complete cure after 24 hours.)

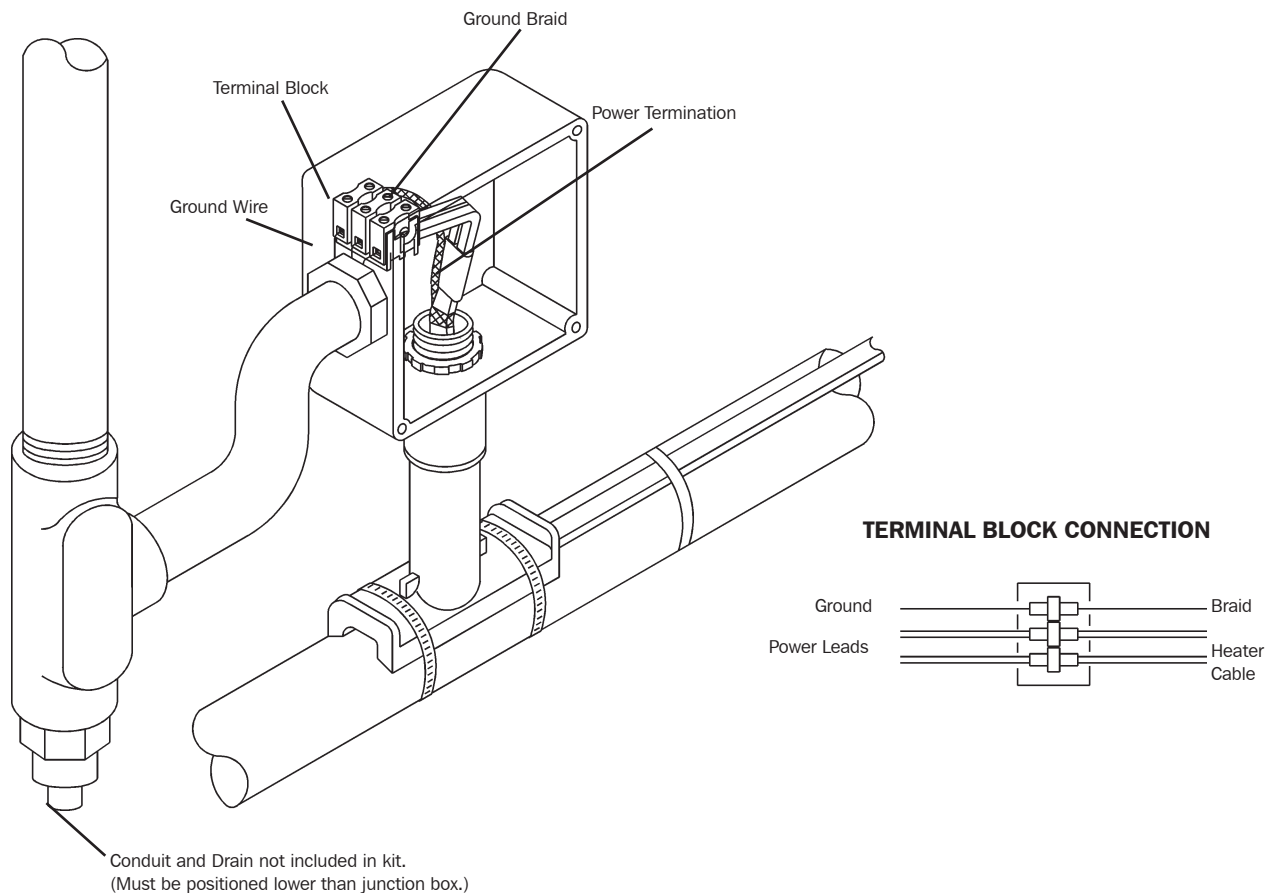
4. Push end seal over the heater cable.



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POWER CONNECTION

1. Place gasket on the box adapter.
2. Position the junction box on the box adapter and secure it with the conduit locknut.
3. Connect bus wires and ground braid from all heater cables to the terminal block. See diagram below.
4. Apply silicone at point braid leaves the overjacket.
5. Push all wires, cables and the terminal block inside junction box.
6. Place the box cover and box cover gasket onto the junction box, and install warning label as required.



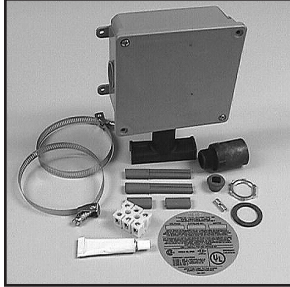
TSR Cable Connection Kits Selection Guide

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



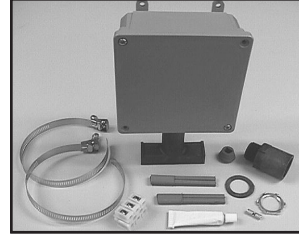
The TSRP Power Connection Kit is suitable for connecting up to two heating cables to customer supplied power wiring. Seals for up to 2 cable ends are also provided.

Models: TSRP3, TSRP12, TSRP20.

Kit Contents

- 1 Universal Base, Box Adapter, Sealing Gasket, and 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

TSRS SPLICE KIT



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

Kit Contents

- 1 Universal Base, Box Adapter, Sealing Gasket and Locknut
- 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"
- 1 Label

TSRL PILOT CIRCUIT KITS

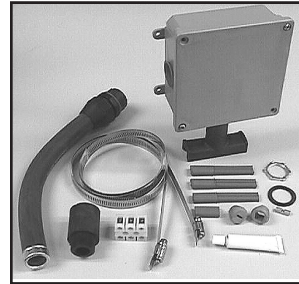


The TSRL Pilot Light Kits are designed as end-of-circuit indicating light assemblies utilizing low temperature neon lamps. Kits are available for 120V, 208V, 240V and 277V operation. Installation of pilot light tail kit ensures that power is applied to the entire cable, and that the heating cable can be expected to operate as designed. Note that if a thermostat controls power to the cable, the pilot light will operate ONLY when the cable is energized.

Kit Contents

- 1 Universal Base, Box Adapter, Sealing Gasket, and Locknut Assembly
- 1 Nonmetallic Junction Box with Cover and Sealing Gasket
- 1 Sealing Grommet
- 1 Power Termination
- 1 Tube Adhesive Sealant
- 1 Ground Connection Splice
- 2 Stainless Steel Pipe Clamps for pipe size up to 12"
- 1 Pilot Light Assembly
- 120 Volt model: TSRL112; 208 Volt model: TSRL812*
- 240 Volt model: TSRL212; 277 Volt model: TSRL712*
- 1 Label

TSRT TEE SPLICE 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.

Kit Contents

- 1 Universal Base, Box Adapter, Sealing Gasket and Locknut Assembly
- 1 Nonmetallic Junction Box with Cover and Sealing Gasket
- 1 Watertight Connection Fitting with 12" Hi-Temp Flexible Tubing
- 1 Sealing Grommet
- 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"
- 1 Label



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