

Installation Instructions

For T-Splice Kit SRHW-TS



The SRHW-TS splice kit is used for joining three lengths of self-regulating heating tape for a branch tree.

De-energize all power before installation or servicing.

The kit contains components needed to make one T-splice.

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www.prothermind.com

2 - 14-16 ga Male Connectors
2 - 10-12 ga Male Connectors
4 - 10-12 ga Female Connectors
1 - 14-16 ga 2 into 1 Connector Adapter
1 - Roll Silicone Self Fusing Tape
2 - Rolls Fiberglass/Silicone Tape
1 - Shrink Sleeve 3/4" x 6" long
1 - Butyl Rubber Sealant

Tools Required:

Crimping Tool
Diagonal Cutting Pliers
Utility Knife or Razor Blade
Measuring Tape

General Installation precautions

1. Ground metal structures used for support or on which the cable is installed in accordance with the National Electric Code.
2. After installation of thermal insulation is complete, the insulation resistance of the entire branch circuit should not be less than 10M ohms.
3. Install cable at -30°C (-22°F) or above.
4. Do not install heater closer than 1/2" to any exposed combustible surface unless the cable has a metal shield or sheath and is provided with a positive temperature control which will limit the surface temperature of the heater to a value not exceeding 72°C (162°F).
5. Minimum bending radius for the heater is 1/4".

Heater Splice

1

Remove the outer jacket for 3".

Push back the braid and strip the heater.

An extra 1/2" needs to be cut from the black inner core to reduce the exposed length from the black inner core to reduce the exposed length from 3" to 2 1/2".

This is done to ensure that the braid pigtail lengths are able to reach the center of the splice for connection later in these instructions.

In preparing the black inner core for splicing, the material in between the conductors needs to be removed from the tips of the conductors 1 1/2".

This is best accomplished using a razor blade or other sharp cutting device.

The goal here is to create a void or channel between the conductors.

One of the conductors should be cut back an additional 1/4".

The black inner core conductors are staggered to minimize the width of the area to be spliced and to accommodate the connectors that are to be applied to the ends of the conductors later in these instructions.

The black material should be stripped from the tips of the conductors 1/4" to enable fastening to the connectors that are described later in these instructions.

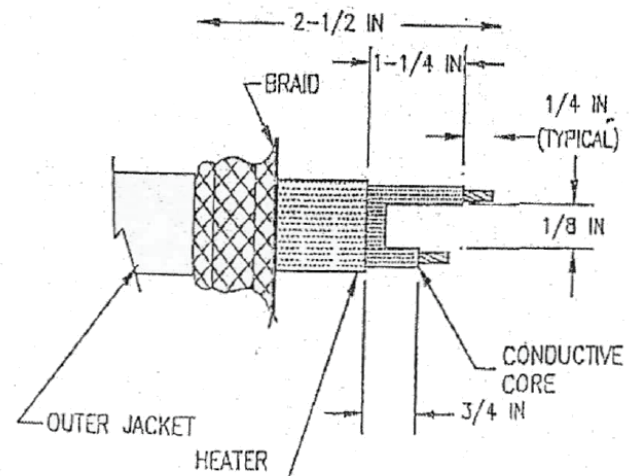


Figure 1

Installation Instructions (Continued)

For T-Splice Kit SRHW-TS

2

Crimp the quick connectors supplied on the bus wires as shown in figure 2.

Tug on the connectors after crimping to insure they are tightly crimped to the heater bus wires.

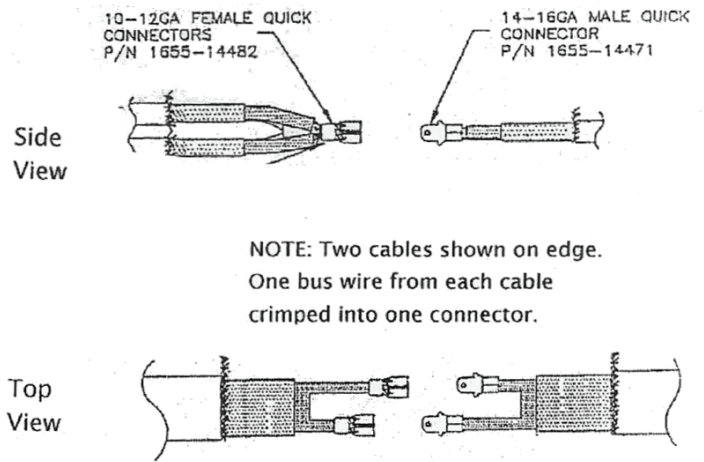


figure 2

3

Slide section of shrink sleeve over single heater.

Insert male quick connector into female quick connector, make sure connection is securely fit together.

(Note that crimps are staggered).

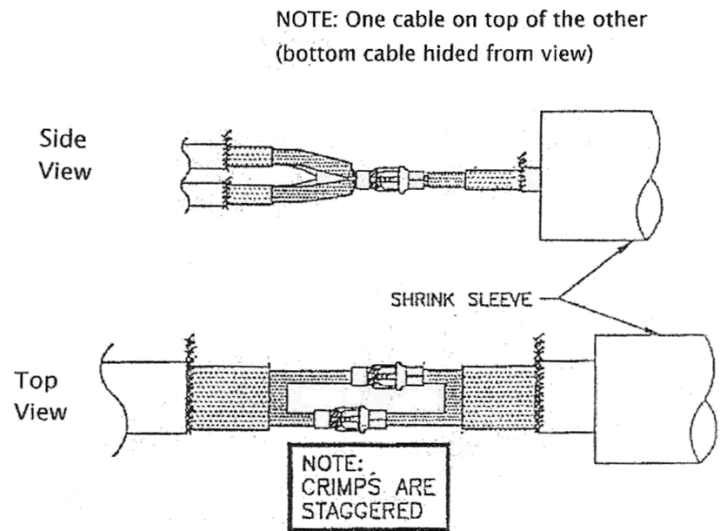


figure 3

4

Cut two 6" pieces of fiberglass/silicone tape.

Cover each connector separately, ensuring complete coverage, overlapping in necessary.

Cover the connector and the black conductive plastic up to the point where the wires are separated.

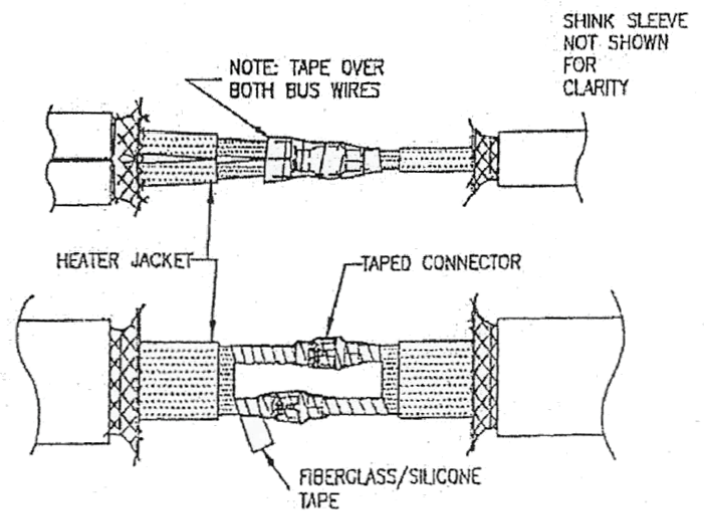


figure 4

Installation Instructions (Continued)

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5

Separate the strands of the braid on all three heaters and twist into pigtails.

These will be connected later.

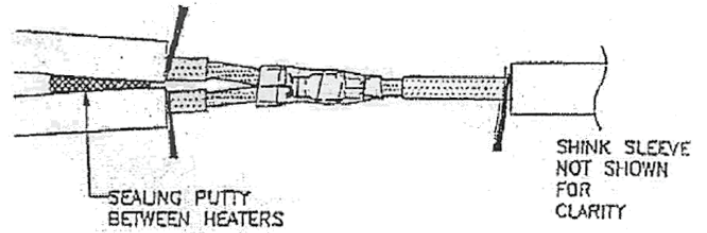


figure 5

6

Remove the backing paper from the black sealing putty provided in the T-Splice kit.

Place the sealing putty between the two heaters as shown in figure 5.

The sealant should be up against the braid pigtail and not touching the black conductive plastic on the heater.

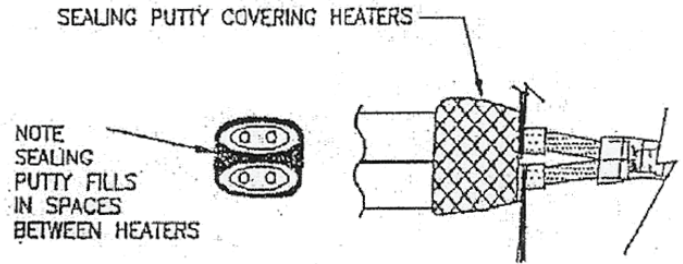


figure 6

7

Wrap the sealing putty around both heaters.

Use the whole length of sealant provided.

Mold the sealant around the heaters so that it seals in the spaces between the heaters and assumes the shape of the heater jacket.

Mold the sealant on the outside of the heaters so it is slightly larger than the heaters outer jacket (see figure 6).

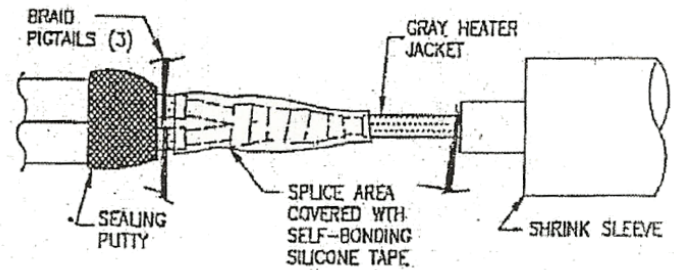


figure 7

8

Wrap the entire splice area with self-fusing silicone tape.

Pull the tape tight when winding to insure bond between layers.

The splice area should be covered with at least two thicknesses of tape.

Be certain that the black conductive plastic is covered.

Do not cover the braid with silicone tape.

Crimp the large quick connect terminals onto the braid pigtails formed in step 5.

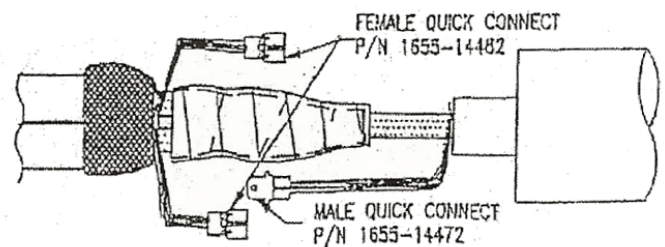


figure 8

The female quick connects are crimped onto the two pigtails on one side, the male quick connect is crimped onto the single pigtail on the opposite side.

Installation Instructions (Continued)

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9

Wrap a single layer of fiberglass/silicone tape over the self-fusing silicone.

10

Push/slide the pigtail connectors together to form the connection.

11

Insert connector adaptor over male connector.

Tug on connector to make sure it is secure.

Insert female connectors to connector adaptor.

Make sure connection is secure.

Secure adaptor and braid to splice with fiberglass/silicone tape.

12

Slide shrink sleeve over splice and shrink into place.

Read below before attempting.

WARNING! Avoid overheating the heat shrink tubing.

Smoke from the surface and/or charring would denote that overheating has occurred.

The tubing will become brittle and may prematurely fail.

Using a heat gun or suitable heat source, **EVENLY** apply heat over the length and around tubing beginning from one end to the other until it is uniformly shrunk.

Heat gun should be placed no closer than 6" and the output temperature of the heat gun should be between 400 and 650°F.

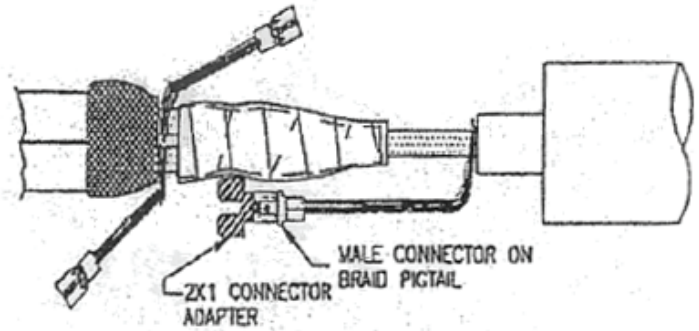


figure 9

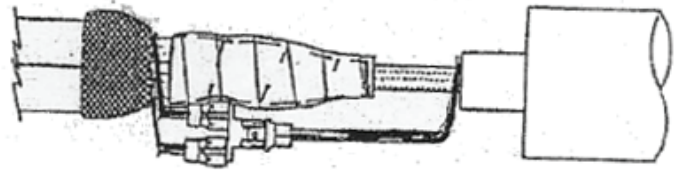


figure 10

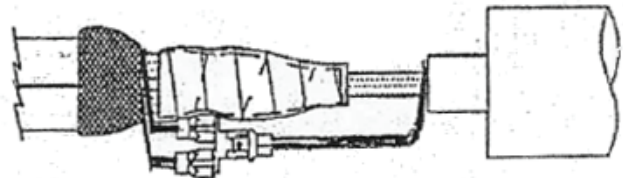


figure 11

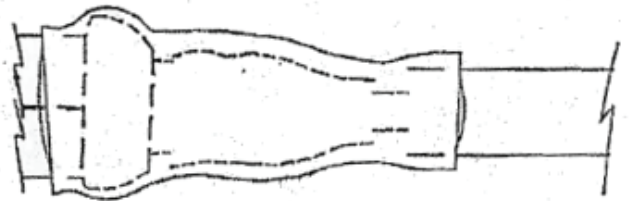


figure 12

Specific details below:

Shrink sleeve should extend about 1" over the outer jacket at each end of the splice.

Heat splice in the center then work to each edge.

Adhesive coating in the shrink sleeve will flow out onto heater at each end.

Allow to cool 1 minute before moving.

Secure completed splice to pipe within 18" of splice using fiberglass/silicone tape.