

Installation Instructions

SERVICE REFERENCE

DIVISION 4	SECTION RT
SALES REFERENCE (Supersedes PJ452-10)	PJ452-11
161-562763-001	
DATE	MARCH, 2009

RTST Splice & Tee Connection Kit for Self-Regulating and Constant Wattage Rapid-Trace Heating Cable



RTST Splice and Tee Connection Kit Parts:

- 1 - Molded Junction Box consisting of:
Base - Box - Lid
- 1 - Three Position Terminal Block
- 4 - Cover Screws, 5/8" Long
- 4 - Box Screws, 1" Long
- 1 - Mounting Screw for Terminal Block
- 1 - Uninsulated Barrel Connector
- 1 - Cover Gasket
- 3 - Black Grommets
- 3 - Orange Grommets

GENERAL

The RTST Splice and Tee Connection Kit is used to make straight and tee splices for braided (-C) and overcoated (-CR or -CT) versions of Self-Regulating and fluoropolymer insulated Constant Wattage Rapid-Trace Heating Cables. Cable grommets are furnished with the kit such that the black grommets are used for self-regulating cables SRL, SRF, SRM/E, SRL/S, SRMF/S and the orange grommets are used for constant wattage cable CWM and self-regulating cable SRS.

Each kit contains enough material to make one straight or one tee splice.

Materials required include: sharp utility knife, standard electrical cutters, screwdriver, crimping tool and a pipe strap.

Wipe inside lip of cover with a clean cloth. Remove protective backing from the gasket and affix it to the cover lip. Press firmly all around for proper adhesion.

INSTALLATION

⚠ WARNING

ELECTRIC SHOCK HAZARD. Disconnect all power before installing or servicing heating cable and accessories. A qualified person must perform installation and service of heating cable and accessories. Heating cable must be effectively grounded in accordance with the National Electrical Code. Failure to comply can result in personal injury or property damage.

Note: These instructions are for all Self-Regulating and Constant Wattage heating cables in ordinary locations. Consult factory for installation of braided cable in hazardous locations. Not all instructions, however, are for all cases. Each step of the instruc-

tions will have a heading in boldface stating which type of cable or connection that instruction is intended for.

1. FOR CONSTANT WATTAGE CABLES:

Cut the cable 12 inches past the last module point (indentation in cable). **Note:** Cutting the cable between module points creates a non-heating cold lead. See Figure 1.



Figure 1

INSTALLATION

2. **FOR CABLE WITH EXPOSED METAL BRAID (-C):**
Push the braid back 12 inches on all cables. See Figure 2.

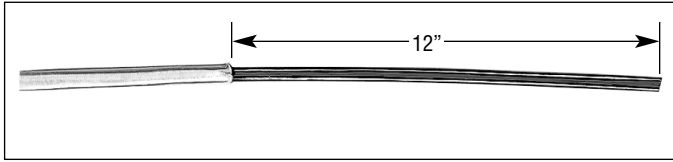


Figure 2

3. **FOR ALL CABLES:**
Feed the ends of the cables through the appropriate hole in the base. Allow eight (8) inches of cable to extend above the top of the base. See Figure 3.

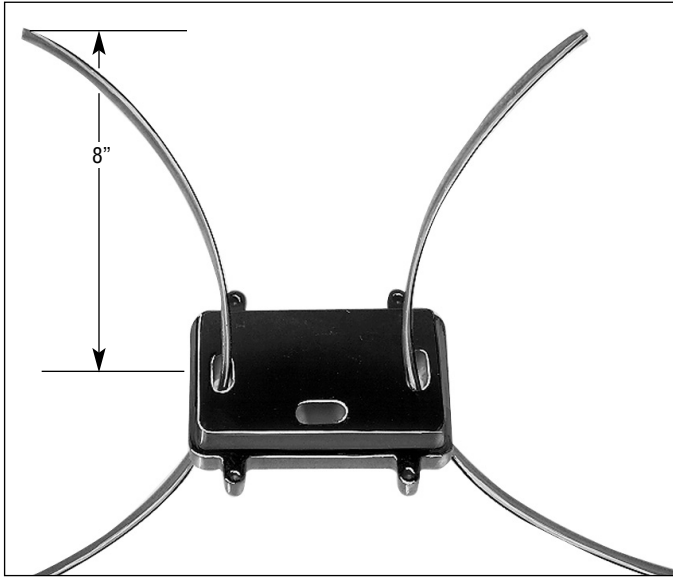


Figure 3

4. **FOR ALL CABLES:**
Slide grommets over the end of the cables and insert them into the openings in the base. Secure the base to the pipe by threading the appropriate sized pipestrap through the slot in the mounting plate. Tighten the pipestrap until the base is securely attached to the pipe. See Figure 4.

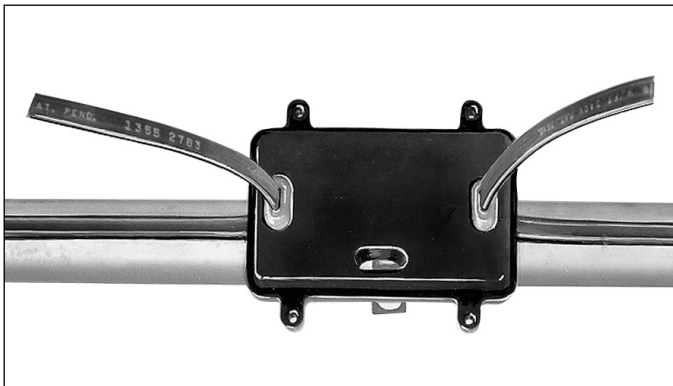


Figure 4

5. **FOR OVERCOATED CABLES (-CR or -CT):**
Score the outer insulation seven (7) inches from the end of the cable. Remove the jacket to expose the metal braid. See Figure 5. **WARNING: Do not damage the braid or the base cable insulation.**

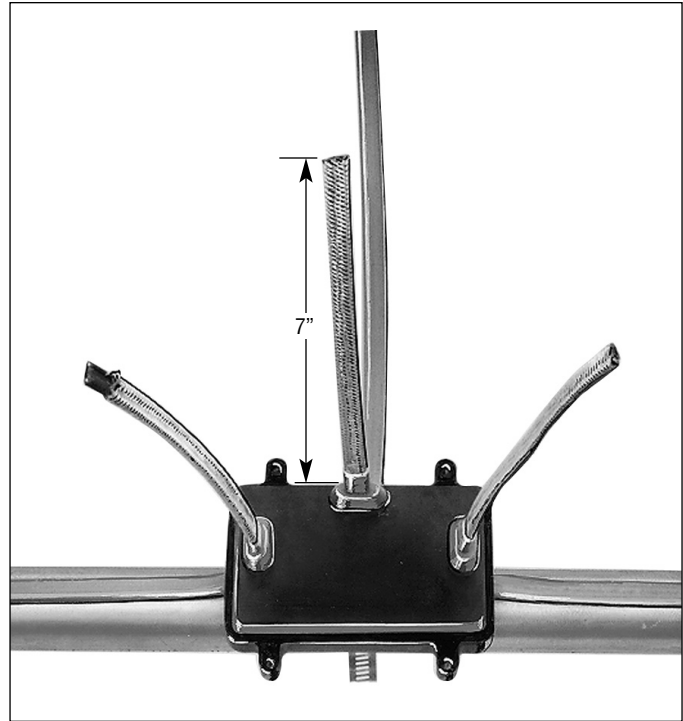


Figure 5

6. **FOR ALL CABLES:**
Punch out the knockouts on the bottom of the box which correspond to the openings in the base through which the heating cable passes. Be careful to punch out only those knockouts to be used. If one is mistakenly punched, blank grommets can be ordered to re-establish the watertight seal. See Figure 6.



Figure 6

INSTALLATION

7. FOR ALL CABLES:

Feed the cables through the corresponding holes in the box. Secure box to base using all four (8/-32) screws. See Figure 7.

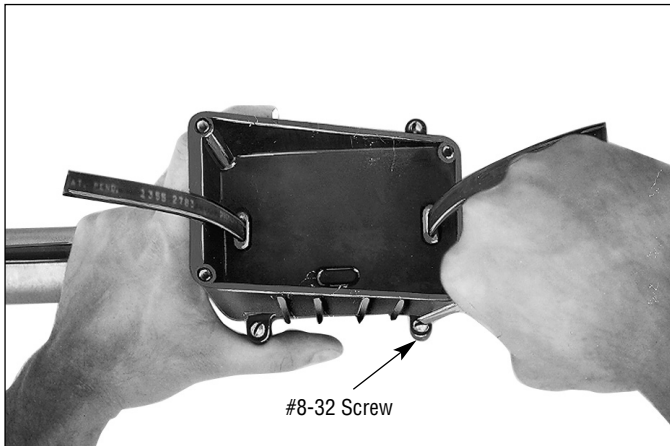


Figure 7

8. FOR OVERCOATED CABLES (-CR or -CT):

Starting from the end of the cable, unravel 2-1/2 inches of the braid. Twist the strands together to form a pigtail. See Figure 8.

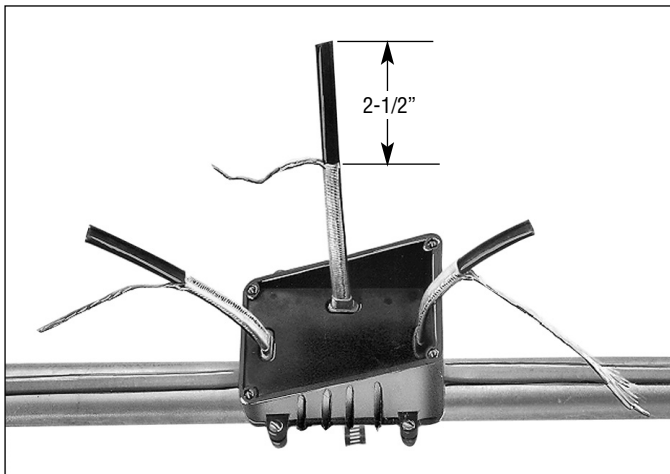


Figure 8

9. FOR SELF-REGULATING CABLES:

Using standard electrical cutters, cut a 3/4 inch long notch out of each cable between the conductor wires. Bare a 3/8 inch length of each conductor by stripping off the outside insulation and the inner black core material. See Figure 9.

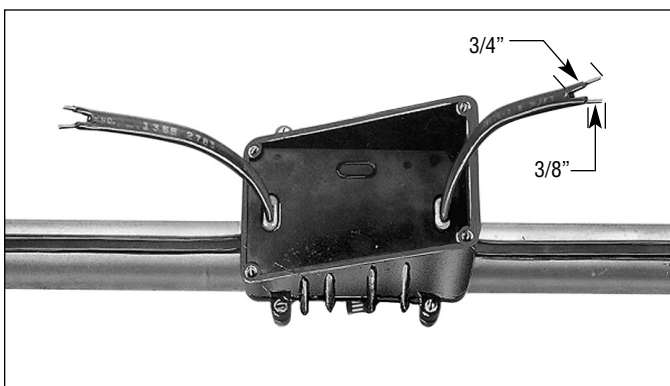


Figure 9

10. FOR CONSTANT WATTAGE CABLES:

Score the outer jacket 3/4 inch from the end of the cable and remove the jacket. Cut off the exposed nichrome wire, pushing any remainder back under the jacket. Constant Wattage cables have an inner layer of insulation which is also to be removed as described above. Separate the buss wires and strip off the last 3/8 inch of insulation from both buss wires. See Figure 10.

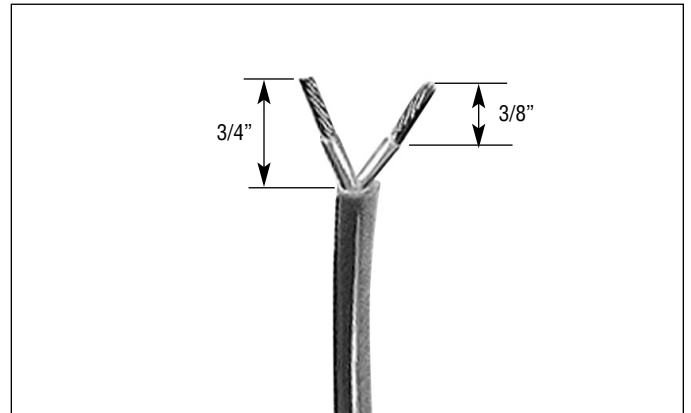


Figure 10

11. FOR TEE SPLICES ONLY:

Align and tape together two (2) cables 1-1/2 inches from the end. Twist the corresponding conductors (and braid pigtails if present) together. See Figure 11.

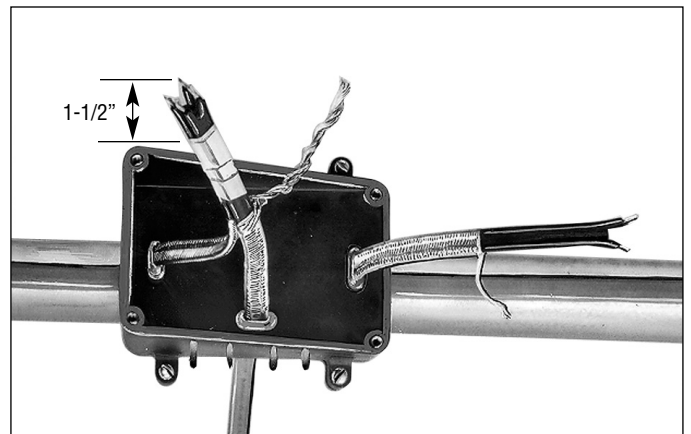


Figure 11

12. FOR ALL CABLES:

Mount terminal ends of the conductors into the corresponding openings in the terminal block. Tighten screws firmly to hold conductors in place. See Figure 12.

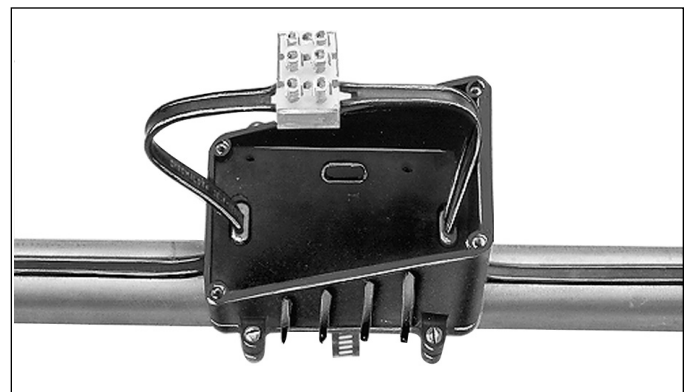


Figure 12

INSTALLATION

13. FOR ALL CABLES:

Mount terminal block to bottom of the box by driving the 6-32 self-tapping screw into the mounting hole as shown. See Figure 13.

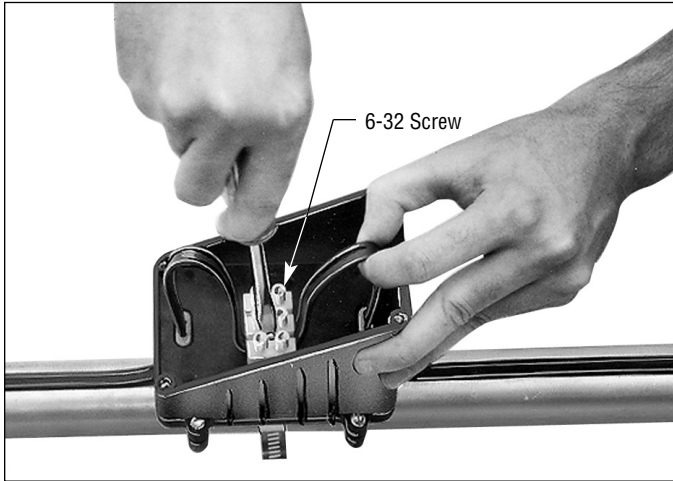


Figure 13

14. FOR ALL CABLES:

Carefully push the wires into the box. Secure lid to box. See Figure 14.

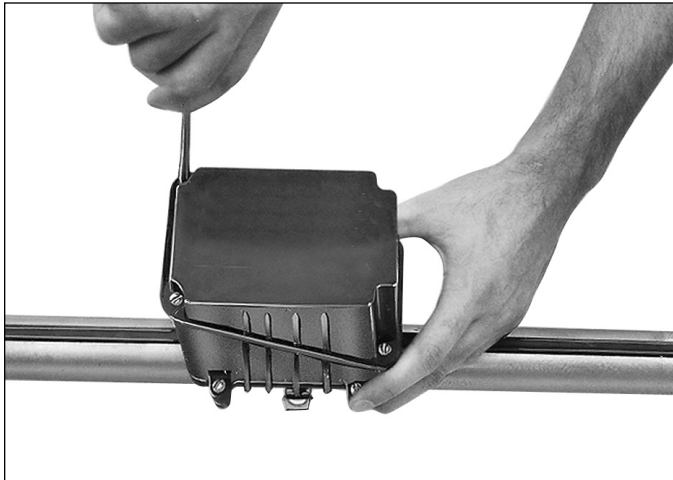


Figure 14

15. FOR CABLE WITH EXPOSED METAL BRAID:

Unravel four (4) inches of braid from all cables and twist into a pigtail. If a tee splice is being performed, twist two of the pigtails together. Fold over the last 1/2 inch of pigtail on any single self-regulating cable. Insert one of the pigtails into the uninsulated barrel connector and crimp it on. Repeat with the other pigtail. See Figure 15.

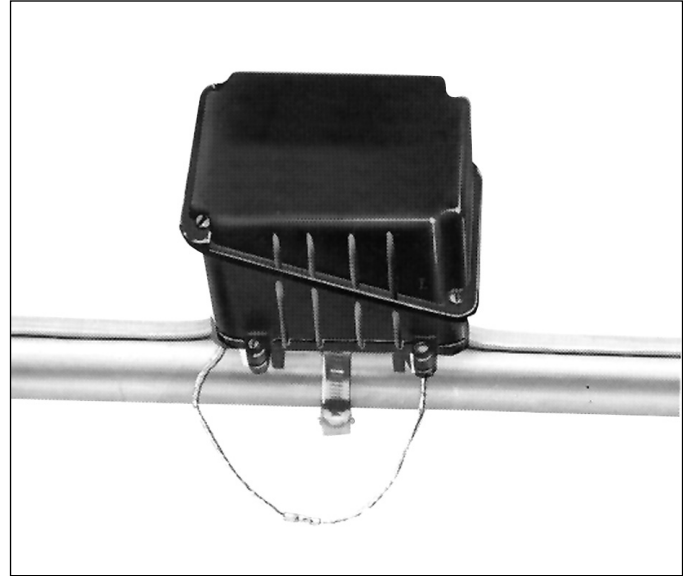


Figure 15