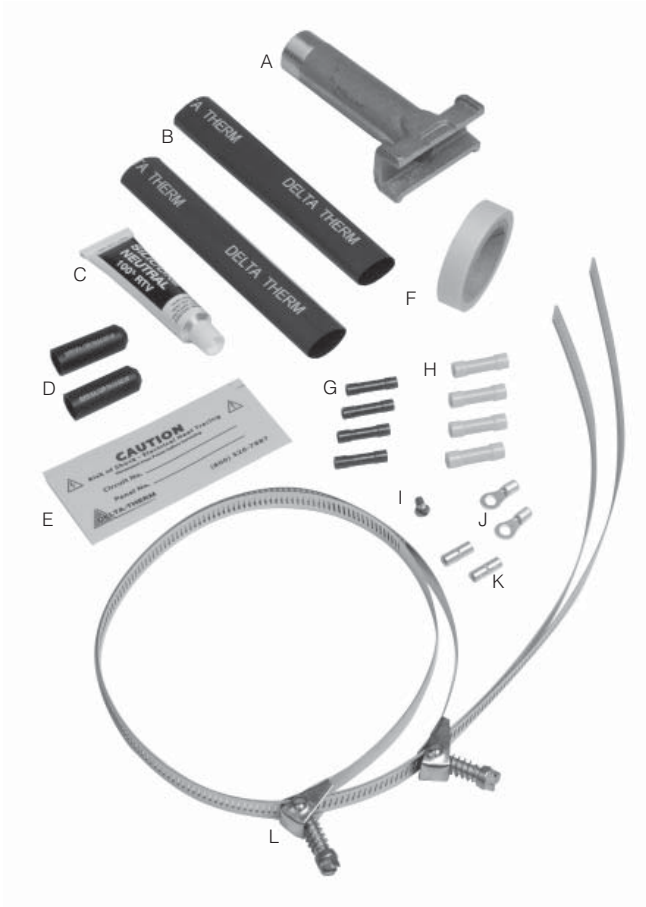


## PCK-IN

### Series Power Connection Kit Industrial (IN) For Pipe Tracing



- A. Aluminum Stand Off
- B. Shrink Sleeve .5" x 5.5" (1 x 14cm) (2)
- C. Silicone Sealant
- D. Heat Shrink Cap .5" x 1.5" (1 x 11cm) (2)
- E. Caution Label
- F. Fiberglass Tape
- G. #16 Butt Connectors (4)
- H. #12 Butt Connectors (4)
- I. Ground Screw
- J. Ring Connectors (2)
- K. Non-Insulated Butt Splice (2)
- L. Stainless Steel Pipe Straps (2)

#### DESCRIPTION

PCK-IN electrical connection kits are a universal all-in-one connection kit for making the electrical connections for all IN Series self-regulating heating elements. The kit contains the necessary components (except conduit box) to make one power connection, one splice connection, and two end terminations. The connection kit fits pipes up to 6" (15cm) IPS. For larger pipes, contact Delta-Therm. The PCK-IN kits are Factory Mutual approved for use in Class I, Division 2, Groups B, C, and D; Class II, Division 2; and Class III, Division 2 areas.

#### INPUT POWER CONNECTION PROCEDURE

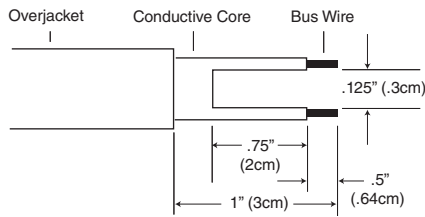
1. Insert the heating element through the connection nipple, allowing 6" (15cm) to extend beyond the top of the connection nipple. (For braided heater, refer to **Braided Heater Grounding Section** on back page.)
2. Place the connection nipple on the pipe surface at the point where the conduit will connect into the system. Fasten the connection nipple to the pipe using the metal cable straps.
3. Screw the appropriately sized connection box (not supplied) onto the connection nipple. Connect the conduit into the connection box.
4. Separate the heater conductors as outlined in the Stripping Procedure section (refer to back page).
5. Slide the shrink tube onto the heater. Pull appropriate size input power wires (not supplied) through the conduit and connect them to the heating element conductors using the insulated butt compression splices. If input power wires are larger than #14, use the larger butt splice. Strip additional .25" (.64cm) from heater bus wires and fold over.
6. Cover the entire splice area with end sealant. Slide the shrink tube over splice so it is centered over the insulated butt compression splice, and then shrink into place with an appropriate heat gun.
7. Seal the connection nipple at the top using the end sealant.
8. Push the splice and input power wire into the connection box and attach the gasket and cover (not supplied).
9. Attach the caution label to the connection box cover.





**WARNING**

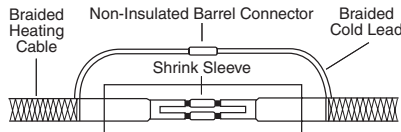
**WARNING:** This kit and the cable used with it must be installed by a qualified electrician. All assembly, installation, and test instructions must be followed. Improper installation can result in property damage, serious injury, and/or death due to electric shock and fires. Please call Delta-Therm Corporation at 1-800-526-7887 with any installation or operating questions.



**Detail 1.** Stripping.

### STRIPPING PROCEDURE

1. Remove outer jacket approximately 1" (3cm) from the end of the heater, exposing the core.
2. Cut out the web of core material .125" (.32cm) wide by .75" (2cm) long.
3. Using wire strippers, remove conductive core .25" (.64cm) from the end of each bus wire.

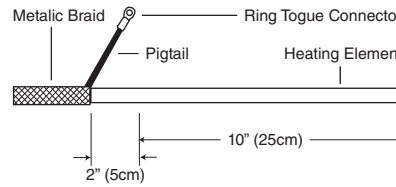


**Detail 2.** Splice connection.

### SPLICE CONNECTION PROCEDURE

1. Bring the heating elements together, allowing approximately .25" (.64cm) gap between them. **NOTE:** For Braided Heater: Unravel braid 4" (10cm) from end of each heater and twist braid into cold lead. Trim the cold lead to remove the tapered end.
2. Separate the heater conductors following the stripping
3. Slide the shrink tube over one of the heating element ends.
4. Connect the heaters using the insulated butt compression splices.
5. Cover the entire splice area with end sealant. Slide the shrink tube over the splice so it is centered over the butt compression splices, and then shrink into place. **NOTE:** When splicing braided heater, do not cover the braid with the shrink sleeve. **NOTE:** Connect the two braid cold leads formed in 1A using a non-insulated compression splice.
6. Secure the spliced area to the pipe with high-temperature tape.

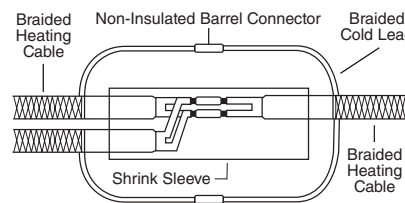
**CAUTION:** Do not terminate self-regulating cable by connecting the two bus wires. Connecting the two bus wires will destroy the cable. If you have any questions, please call 1-800-526-7887.



**Detail 3.** Heater grounding.

### BRAIDED HEATER GROUNDING FOR CLASS I, DIVISION 2 AREAS

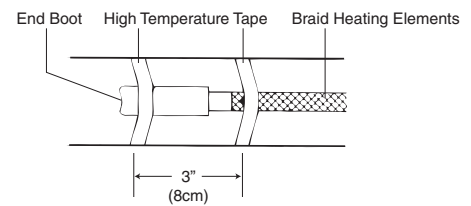
1. Remove 10" (25cm) of metallic braid from the end of the heating element.
2. Unravel the next 2" (5cm) of metallic braid and twist into a cold lead. Attach the ring tongue connector to the cold lead.
3. Connect the ring tongue connector to the connection nipple using ground screw.



**Detail 4.** Tee splice connection.

### TEE SPLICE CONNECTION PROCEDURE

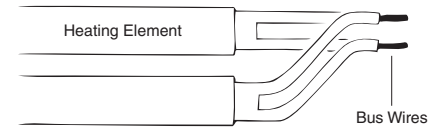
1. Follow steps 1 and 2 in Splice Connection Procedure. **NOTE:** For braided heater, unravel the braid 4" (10cm) from the end of each heater.
2. For the T connection, twist together one bus wire from each of two heaters, connecting the heaters in parallel.
3. Slide the shrink tube over the single heater.
4. Connect the three heaters using the insulated butt compression splices.
5. Seal the splice area with end sealant. Seal the ends of the heaters and any part where the jacket has been removed.
6. Center the shrink tube over the splice and shrink into place. **NOTE:** If braided heater is used, DO NOT cover the braid with the shrink tube. **NOTE:** Separate the braid on the single heater into two equal strands. Twist the braid to form two cold leads on the single heater and one cold lead each on the other heaters. **NOTE:** Connect the braid cold leads as shown in the diagram, using two non-insulated butt compression splices.



**Detail 5.** Termination.

### TERMINATION PROCEDURE

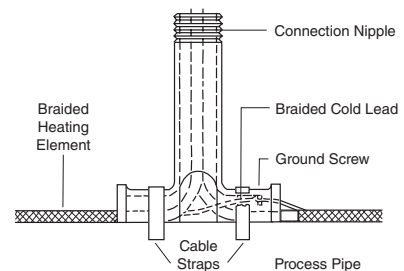
1. Remove the metallic braid 3" (8cm) from end.
2. Trim the end of the heating element so that one bus wire is .25" (.64cm) shorter than the other.
3. (**Refer to CAUTION below.**) Slide the heat shrink cap over the end of the heater and shrink into place. Heat until glue begins to flow from cap.
4. Anchor the heating element and end cap onto pipe using high-temperature tape.



**Detail 6.** Input power splice.

### INPUT POWER SPLICE

1. Follow steps 1 through 4 of Input Power Connection Procedure (Refer to front page).
2. Twist one bus wire from each heater together with a bus wire from the other heater, connecting the heaters in parallel (Refer to diagram above)
3. Slide the shrink tube onto the heater. Pull the input power wires (not supplied) through the conduit and into the connection box.



**Detail 7.** Connect input power wires.

4. Connect the input power wires to the pairs of heater bus wires using the insulated butt compression splices. Follow steps 6 through 9 on Input Power Connection Procedure (Refer to front page).