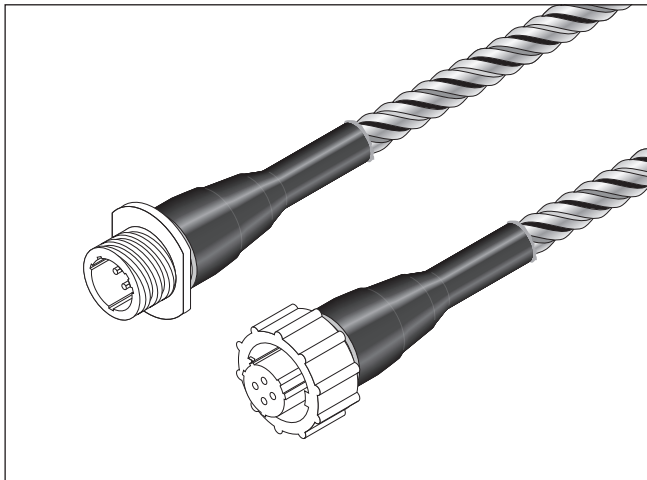




RAYCHEM
TraceTek

TT-1000-CK-PC-M/F
TT-1000-CK-PC-M/F-100

**Field Installed Connectors for TraceTek 1000 Bulk Cable
Installation Instructions**



TT-1000/JC-CK-PC-M/F (PN P00000080)
KIT CONTENTS (10 M and 10 F connectors)

Item	Qty	Description
A	10	TT-CK-PC-F socket connector
B	10	TT-CK-PC-M pin connector
C	10	Silicone washer
D	20	Heat-shrinkable tubing, labeled SCT (0 extra)
E	85	SolderSleeve® splices (5 extra)

TT-1000/JC-CK-PC-M/F-100 (PN 269496-000)
KIT CONTENTS (100 M and 100 F connectors)

Item	Qty	Description
A	100	TT-CK-PC-F socket connector
B	100	TT-CK-PC-M pin connector
C	100	Silicone washer
D	200	Heat-shrinkable tubing, labeled SCT (0 extra)
E	850	SolderSleeve splices (50 extra)

DESCRIPTION

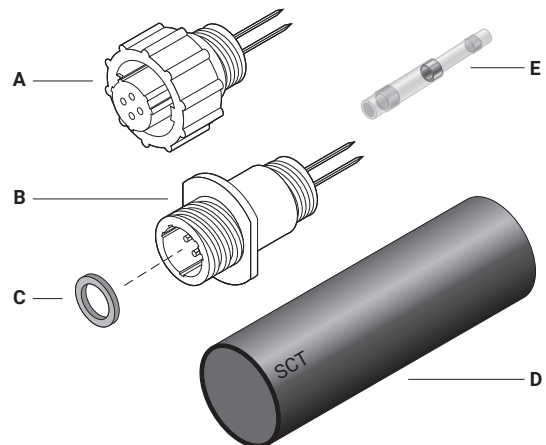
These instructions describe field connecting of nVent RAYCHEM TraceTek TT1000 Bulk Sensing Cable. For technical support, call nVent at (800) 545-6258.

TOOLS REQUIRED

- TT-STRIPPER (PN 358979-000) Greenlee stripper (1917) or equivalent for 26 AWG wire
- TT-ULTRA-TORCH (PN 390067-000) flameless heating tool (Ultratorch 200) or suitable heat gun with concentrator tip
- High impedance ohm-meter (Fluke 87 or equivalent; meter must be capable of measuring to at least 20 megohm)
- TT-CT-SCT crimp tool (PN 644333-000)
- Needle nose pliers
- Small wire cutters
- TT-MET-PC (PN 169905-000)

NOTES

- Do not use an open flame heating tool.
- The pin connector should always be installed on the cable end going to the alarm module.



⚠ WARNING:

Fire Hazard. Heat guns and flameless heating tools can cause fire or explosion in hazardous areas. Be sure there are no flammable materials or vapors in the area before using these tools. Follow all site safety guidelines when working in hazardous areas.

Component approvals and performance are based on the use of specified parts only.

⚠ CAUTION:

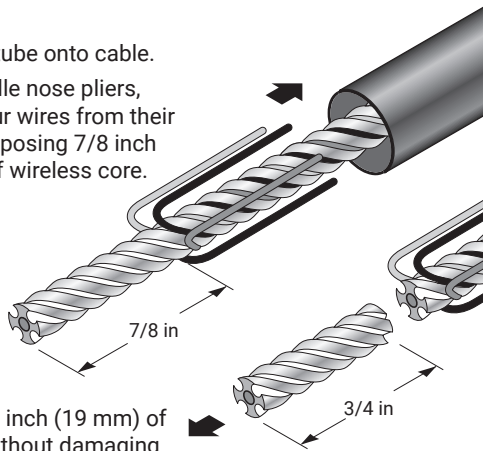
Health Hazard. Overheating heat-shrinkable tubing or SolderSleeves will produce fumes that may cause irritation. Use adequate ventilation and avoid charring or burning. Consult MSDS RAY3122 and RAY5103 for further information.

CHEMTREC 24-hour emergency telephone:
(800) 424-9300

Non-emergency health and safety information:
(800) 545-6258.

1

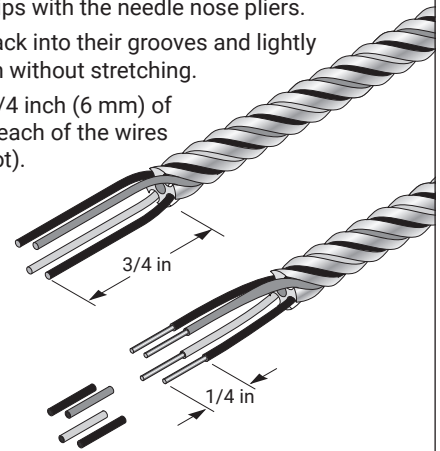
- Slide SCT tube onto cable.
- Using needle nose pliers, pull the four wires from their grooves exposing 7/8 inch (22 mm) of wireless core.



- Cut off 3/4 inch (19 mm) of the core without damaging the wires.

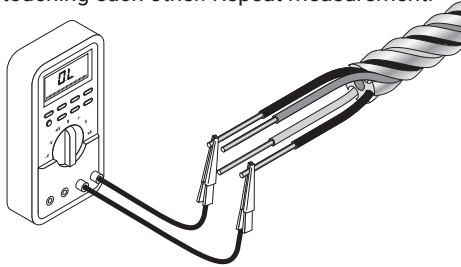
2

- Grasp the wire tips with the needle nose pliers.
- Pull the wires back into their grooves and lightly tug to straighten without stretching.
- Carefully strip 1/4 inch (6 mm) of insulation from each of the wires (use 26 AWG slot).



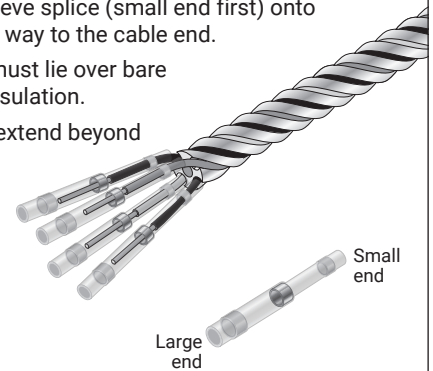
3

- Use the ohmmeter to measure the resistance between the black wires. The resistance must be greater than 20 megohm (meter may read: ∞, O.L., etc.).
- If the measurement is less than 20 megohm, check that the cable is not wet or contaminated, and make sure the wires are not touching each other. Repeat measurement.



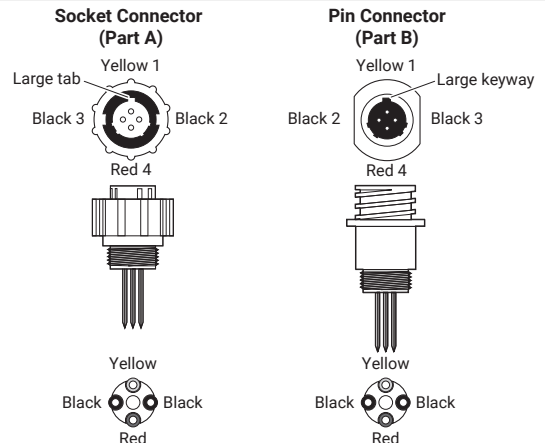
4

- Keep wires in the same order that they exit from the cable end.
- Slide a SolderSleeve splice (small end first) onto each wire, all the way to the cable end.
- The solder ring must lie over bare conductor, not insulation.
- Wire ends must extend beyond the solder rings.



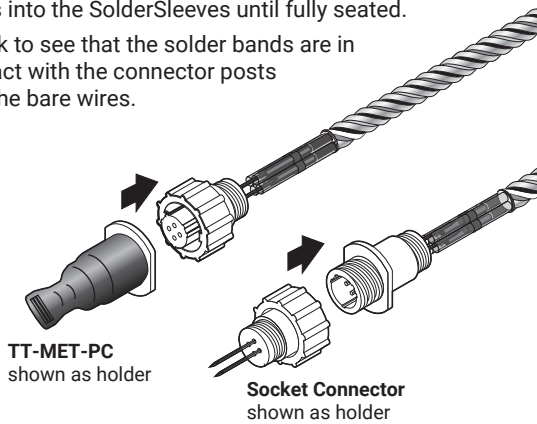
5 Install the Connector

- Examine the mating end of the connectors. The large plastic tab (socket connector) or the large key way (pin connector) corresponds to the yellow wire. Each pin/socket position is numbered on the front and back of the connector body. Once the yellow wire is aligned correctly to pin #1, the other wires are aligned also.
- The wires must be in the order that they exit the cable end.



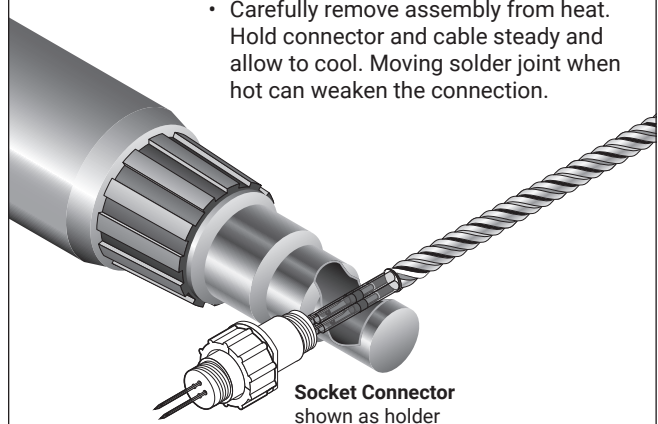
6

- Insert TT-MET-PC to use as a holder while applying heat. (For pin connector use a Socket Connector as a holder.)
- Orient the connector and push the aligned connector posts into the SolderSleeves until fully seated.
- Check to see that the solder bands are in contact with the connector posts and the bare wires.



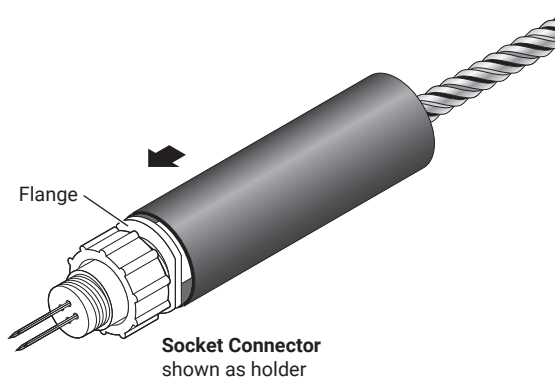
7

- Heat the SolderSleeves until they have shrunk fully and the solder rings have melted and flowed. **Keep the heat source moving to avoid charring the connector.**
 - Carefully remove assembly from heat. Hold connector and cable steady and allow to cool. Moving solder joint when hot can weaken the connection.



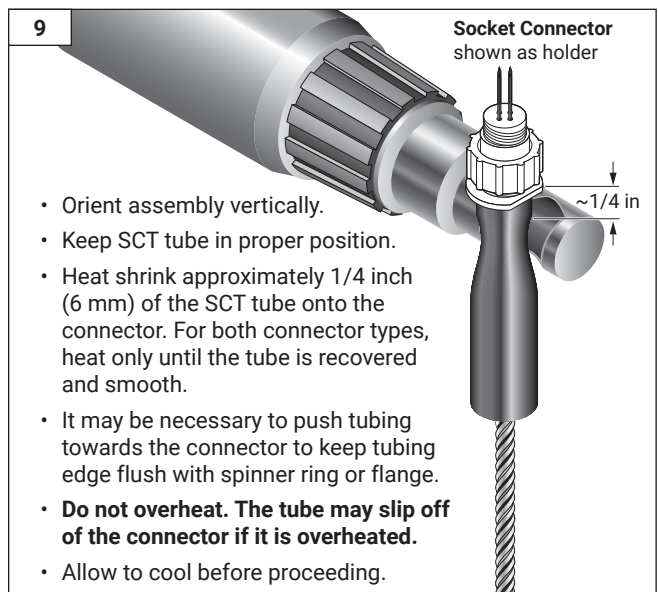
8

- Push SCT tube to the flange section for either connector type.



9

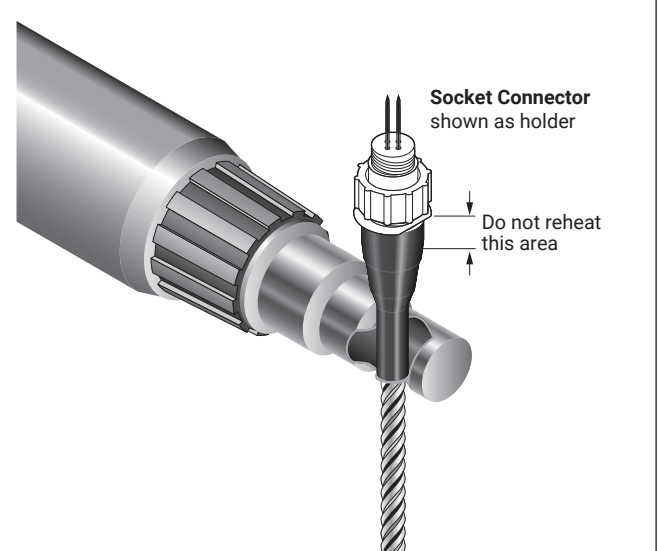
- Orient assembly vertically.
- Keep SCT tube in proper position.
- Heat shrink approximately 1/4 inch (6 mm) of the SCT tube onto the connector. For both connector types, heat only until the tube is recovered and smooth.
- It may be necessary to push tubing towards the connector to keep tubing edge flush with spinner ring or flange.
- **Do not overheat. The tube may slip off of the connector if it is overheated.**
- Allow to cool before proceeding.



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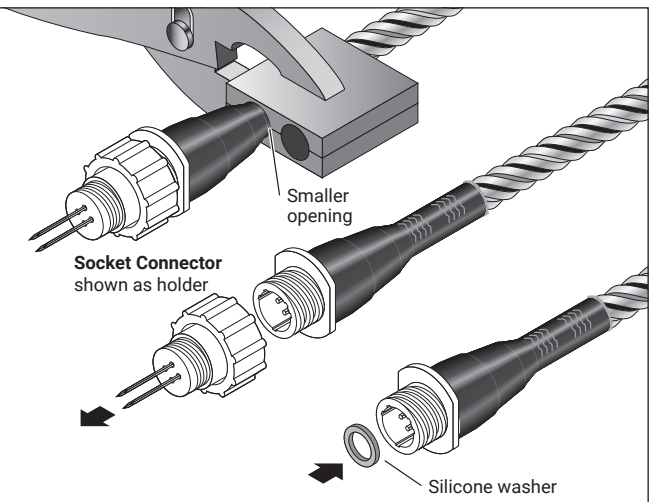
- Finish shrinking the tube, starting at the end opposite the connector.
- Heat the tubing end until adhesive melts and beads at tubing end.
- If a void is visible, use a glove or rag to squeeze the tube slightly and fill the void with molten adhesive.
- Keep heating the tubing section in the middle of tube until fully recovered.
- Avoid reheating the already shrunk section on the connector body.
- Proceed to the next step before the tube cools.

⚠ CAUTION: Burn Hazard
 Do not get hot adhesive on your bare skin.
 The hot adhesive will burn your skin.



11

- While the tubing is still hot, place tubing in the smaller opening of the crimp tool. Align opening with Solder Sleeve/cable area. Crimp SCT tubing to cool and seal. Open and rotate crimp tool 90 degrees and crimp again to ensure proper adherence to the cable.
- If the tubing has moved more than 1/8 inch (3 mm) off the threaded connector, push the hot tubing back to the original position while supporting assembly using "holder" connector. You may have to reheat the tube. Hold the crimp tool in place while it cools the tube.
- Apply heat to tubing one last time to soften the creases made by the crimp tool. Do not overheat.
- Remove the crimp tool and let the assembly finish cooling.
- Remove the "holder" connector and for the pin connector, insert the silicone washer.

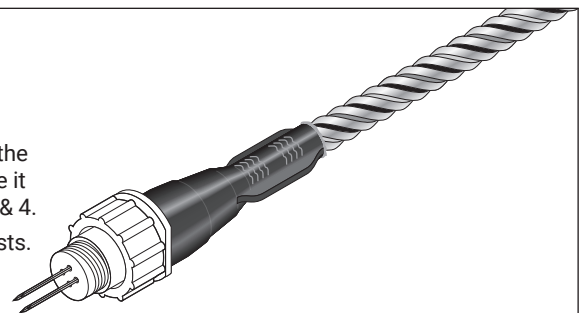


12 Test the Connector Assembly

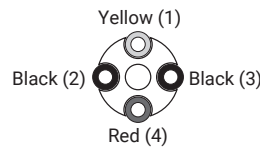
Electrical Test

- Attach the mating connector with posts to the connector to be tested.
- If both cable ends have connectors, attach a mating end termination at the opposite end. If there is no connector on the opposite cable end, prepare it according to steps 1 thru 3. Then twist together wires 1 & 2 and wires 3 & 4.
- Use an ohmmeter to measure the resistance between the connector posts.
- The resistance between post 1 & 2, or 3 & 4 should be about 4000Ω per 1000 feet (303 m) of cable length (i.e. a 100 ft. (30 m) cable should measure approximately 400Ω between the posts).
- The resistance between post 2 and 3 should be greater than 20 megohms.
- If the assembly fails any of the resistance tests;
 - 1) Check that the wires are not touching at the opposite cable end, if not connectorized.
 - 2) If necessary, cut off and discard the connector and install a new one.

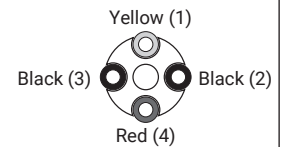
Note: Do not leave connector open to environment. If the connector becomes wet or contaminated, it will need to be replaced.



Wire orientation at cable end opposite socket connector



Wire orientation at cable end opposite pin connector



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