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ENGINEERING STANDARDS

ES-61235
REV A
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Installation Procedure for DK-602-0169 and –0170 Triaxial Contacts

1. Scope

This engineering standard covers the termination procedures for DK-602-0169 and DK-602-0170 triaxial contacts.

2. References

Raychem Specification Control Drawings: DK-602-0169, DK-602-0170

Raychem Application Equipment Instructions:

- AA-400 SuperHeater: H50324
- HL1920E/HL2020E HeatGun Heating Tool
- AD-1319 Holding Fixture: H50671

3. Equipment and Materials

AA-400 SuperHeater heating tool with miniature SolderSleeve reflector

HL1920E / HL2020E Steinel Hot Air Gun with EH0600-000 HL-Soldersleeve Reflector

AD-1319 holding fixture with AT-1319-14 cable clamp and AT-1319-22 contact adapter

Shear type wire cutter: Miller Model 101-S or equivalent (K. Miller Tool Co., West Springfield, MA)

Sn63 solder per QQ-S-571
RMA flux
Solder pot
Hand tools: die blade wire stripper, tweezers, diagonal cutter, etc.

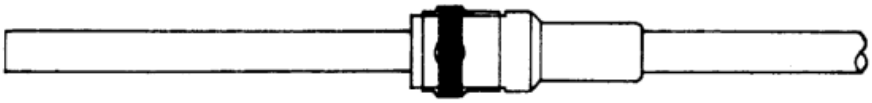
NOTE
Consult the connector manufacturer for information on connector accessories and contact installation procedures.

Note: Steinel HL1920E / HL2020E Replaces CV5300 MiniGun®. But they still can be used

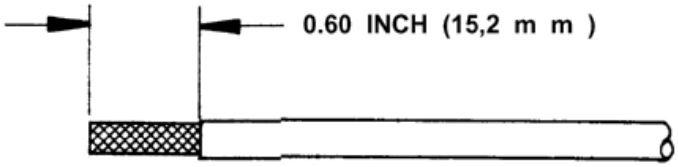
4. Procedure

1. If any components such as sealing grommets or other accessories must be installed onto the cable before the triaxial contact is terminated, slide those components onto the cable and move them back out of the way.

2. Slide the braid terminator onto the cable.
   - The end with the solder ring goes toward the end of the cable.

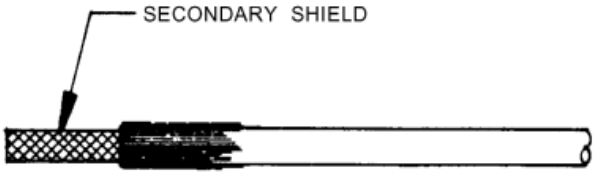


3. Strip the outer jacket 0.60 inch.

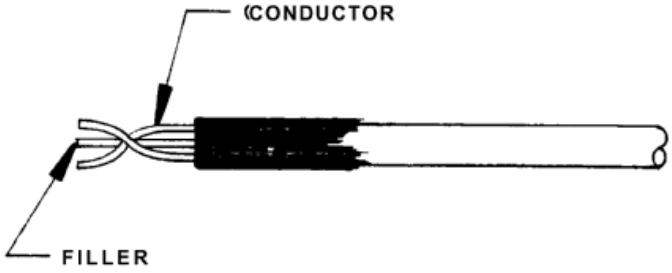


4. Unbraid the outer shield and comb the strands back over the outer jacket.

5. Remove any inner jacket and/or Mu metal wrapped shielding back to the folded braid.



6. Unbraid the inner shield, if there is one, and comb the strands back over the outer jacket (along with the strands from the outer shield).

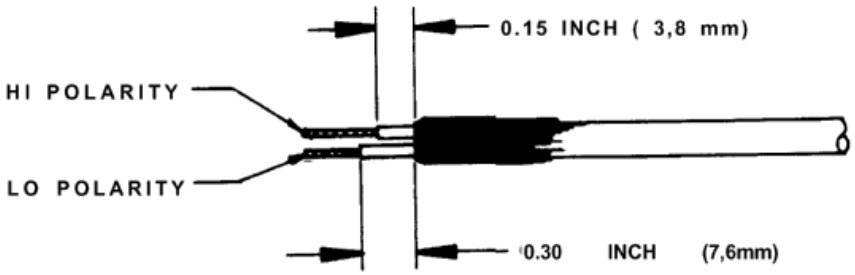


7. Remove any filler materials back to the braid.

8. Untwist and straighten the two inner conductors.

9. Strip the inner conductors as shown.

    - Use a die blade stripper of the correct size for the wires.

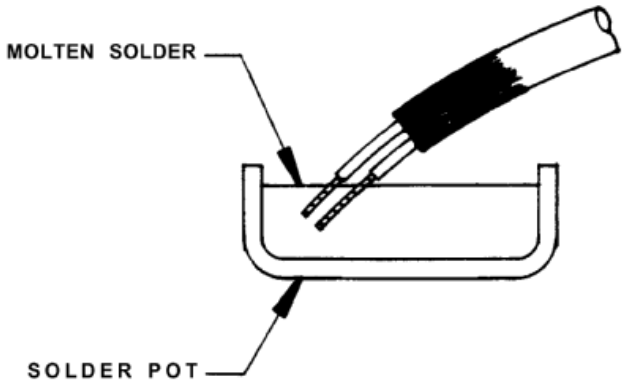


10. Flux the inner conductors the full length of the exposed wire using type RMA flux.

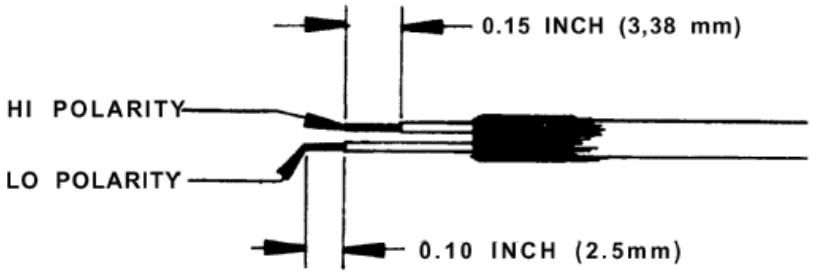
11. Pretin the inner conductors the full length of the exposed wire using type Sn63 solder.

    - Solder temperature should be 500° ± 20°F.

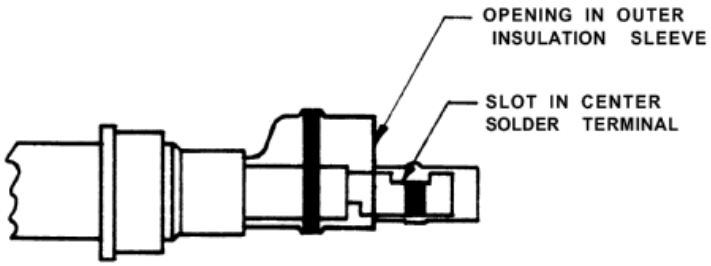
    - Dip the wires in molten solder with the cable angled as shown to tin the full length of both stripped conductors without dipping any of the insulation in solder.



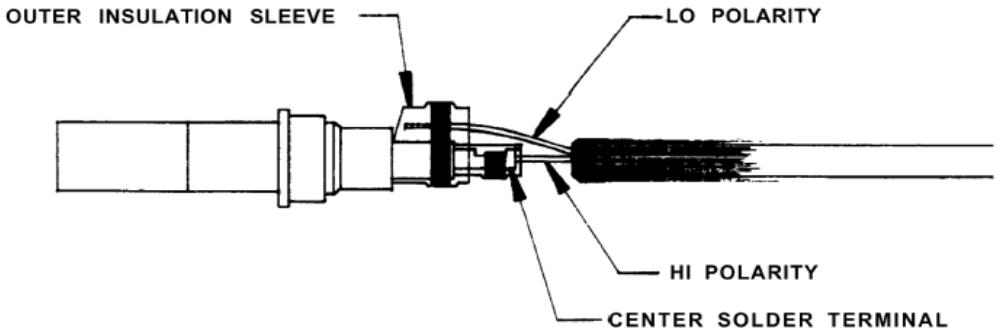
12. Trim both inner conductors as shown.
    - Use a shear type cutter such as a Miller Model 101-S cutter to avoid deforming the conductor ends. Do not use diagonal or other cutters with blades that pinch.



13. Turn the outer insulation sleeve so that the opening is lined up with the slot in the center solder terminal.

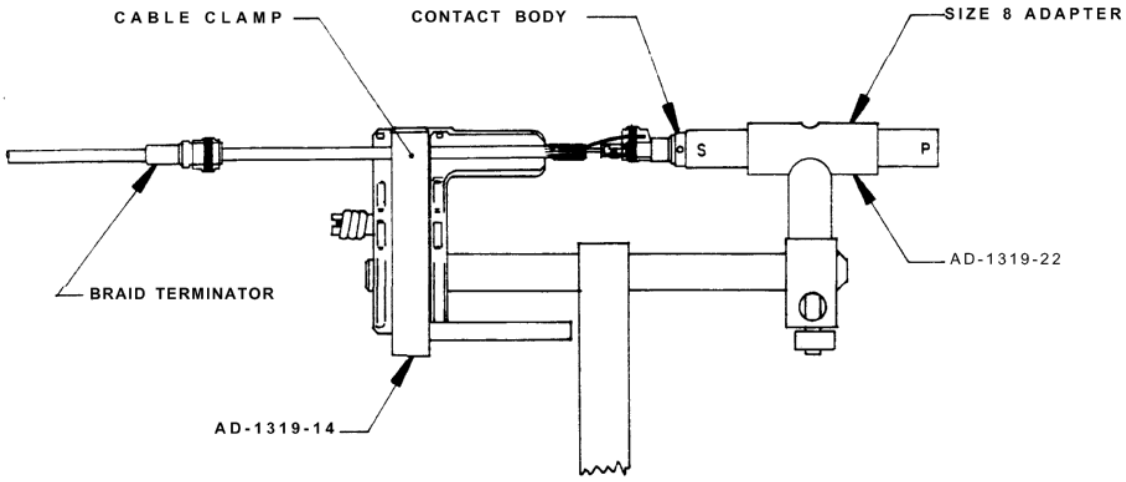


14. Carefully insert the inner conductors into the rear of the triaxial contact.
    - Make sure that the outer insulation sleeve (with the off-center cavity) is pushed into the contact as far as it will go.
    - The short (HI polarity) wire goes into the center solder terminal, and the long (LO polarity) wire goes inside the outer insulation sleeve and under the solder ring as shown.
    - Insulation sleeves must overlap the conductor insulation.



15. Insert the contact into the cavity of the size 8 adapter of the AD-1319 fixture, and clamp the cable in line with the contact.

    - DK-602-0169 pin contacts in “P” end of adapter.
    - DK-602-0170 socket contacts in “S” end of adapter.

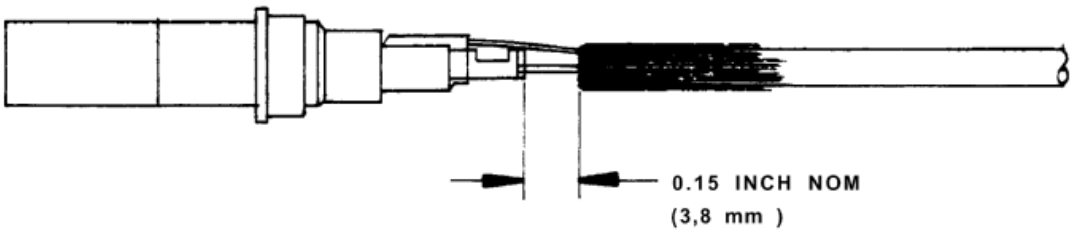


16. Apply heat to the termination area until both solder rings melt and flow and the insulation sleeves shrink onto the wire insulation.

    - Use the AA-400 SuperHeater with the miniature SolderSleeve reflector, or the HL1920E/HL2020E HeatGun with EH0600-000 HL-Soldersleeve Reflector.
    - Aim the heat at the outer insulation sleeve first; as soon as the solder melts, aim the heat at the center solder terminal.
    - Stop heating the instant both solder rings have melted and flowed.
      CAUTION: Overheating will damage the contact.

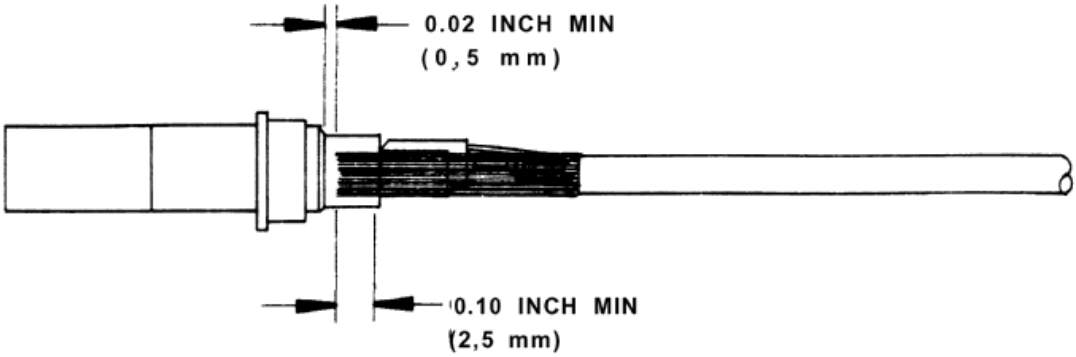
17 Inspect the solder terminations of both conductors for proper positioning and heating.

- Wire positions must be as shown below.



- Both solder rings must be melted and flowed so as to form a solder fillet between the conductor and the surface of the contact.

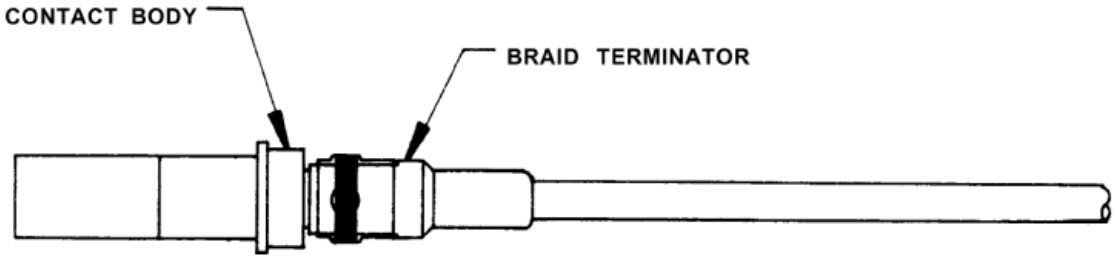
18. Bring the braid strands forward and trim them against the contact body as shown.



19. Arrange the braid strands so that they are evenly distributed around the contact, but do not pass directly over the LO-polarity wire.

- Braid strands passing directly over the LO-polarity wire would cause too much diameter buildup and improper installation of the braid terminator.

20. Push the braid terminator forward over the rear of the contact until the leading edge of the braid terminator touches the contact body.



• Continue to keep the contact fixtured in the AD-1319 holding fixture with the size 8 adapter.

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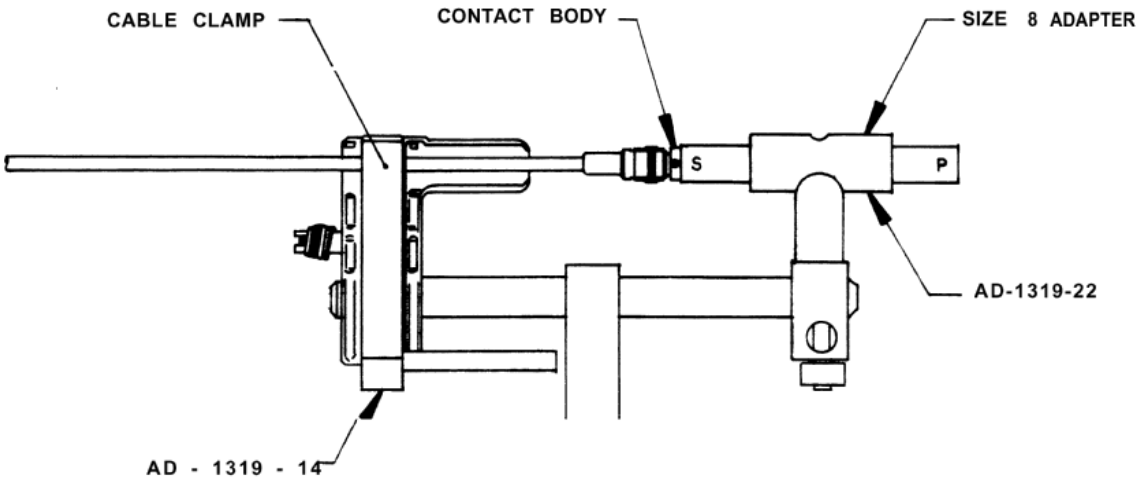
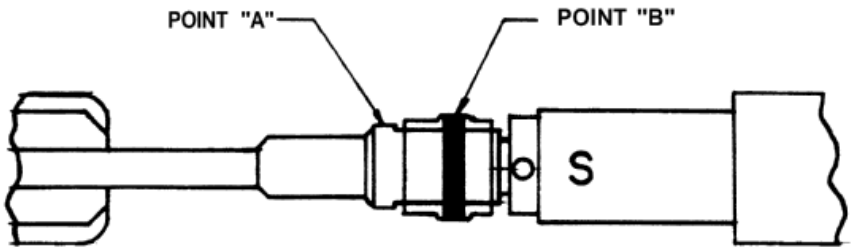
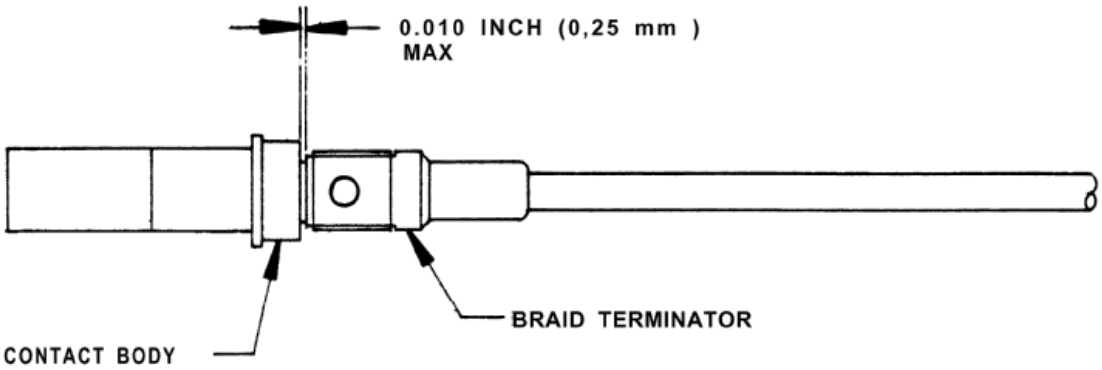


21. Apply heat to the braid terminator until the solder melts and flows through the holes in the braid terminator and into the braid strands underneath.
    - Use the AA-400 SuperHeater with the miniature SolderSleeve reflector or the HL1920E/HL2020E HeatGun with EH0600-000 HL-Soldersleeve Reflector.
    - Use pliers or a screwdriver to hold the braid terminator in position and prevent movement during heating.
    - Proper heating should take 10 to 20 seconds in still air at room temperature. Begin heating at point A (see figure). When a line of molten solder becomes visible, move the heat slowly to point B (the solder ring). Then heat the solder ring until it melts. Remove the heat and hold the assembly still until the solder solidifies.



22. Inspect the braid termination for proper positioning and heating.
    - The braid terminator must be positioned as shown on the rear of the contact body.



- The solder must have completely melted and flowed through the holes in the braid terminator body and into the braid strands underneath.