CEELOK FAS-T* Cable Harness Manufacturing Guide



Figure 1

1. INTRODUCTION (Figures 1 and 2)

The following instructions detail the steps for terminating the CEELOK FAS-T Connector harness. Refer to documents: Raychem RCPS-100-70 installation procedure for solder sleeve termination; Application Specification 114-32025 for CEELOK FAS-T High Speed Circular Connector System; and Installation Procedure ELE-3COP-375 for braid termination using a band strap adapter.



Dimensions in this instruction sheet are in millimeters [with inches in brackets]. Figures and illustrations are for reference only and are not drawn to scale.

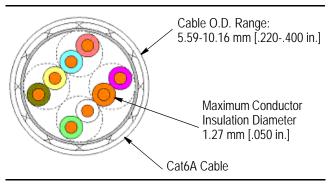


Figure 2

1. Cut the cable to the desired length. Use an appropriate cable cutter. Mark and strip approximately 31.75 \pm 1.57 mm [1.25 \pm .062 in.] of cable jacket over the braid section. Refer to Figures 3 and 4.

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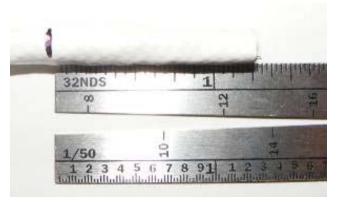


Figure 3



Figure 4

2. Fold the braid back over the cable jacket and remove foil wrap (if it exists) to expose the internal conductors. Refer to Figure 5.





Figure 5

3. Untwist the conductor pairs and strip to the length of approximately 3.18 \pm 0.76 mm [.125 \pm .030 in.]. Terminate pins (2102349-3) or sockets (2102350-5) to the conductors using crimp tool M22520/2-01 with positioner K1850. Refer to Figures 6 thru 8.

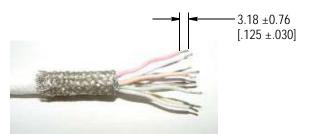


Figure 6

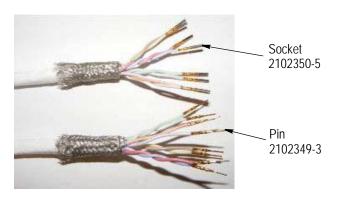


Figure 7



Figure 8

4. Re-twist wires to include two full twists prior to inserting them into the connector housing. Insert the contact into the circuit cavity and push it into the cavity until it "clicks" into place. During insertion, care should be taken to make sure the conductor pairs are loaded into adjacent circuit cavities.

For example, one pair should be loaded into cavities (1 and 2), another pair in cavities (3 and 4), another pair in cavities (5 and 6), and another pair in cavities (7 and 8). If it is difficult to seat the contacts by hand, the insertion tip of tool DHK696 can be used. The tip will push on the rear of the crimp barrel of the contact. Refer to Figures 9 thru 12.

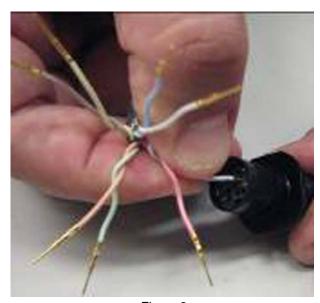


Figure 9

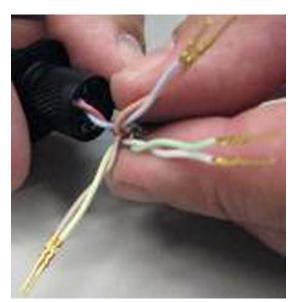


Figure 10



Figure 11

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Figure 12

5. In cases where the contact needs to be removed from the connector after it is locked in place, the extraction tip of tool DHK696 is inserted into the circuit cavity to engage the latching clip tine to release it from the contact. The tip of the tool should be inserted at the outer side of the circuit cavity pair and oriented approximately 90° to the cavity I.D. lettering.

The tip is inserted until the handle is bottomed on the plastic housing. the wire is then gripped and held against the tool body as the tool is carefully removed. The contact can then be re-inserted after it is repaired or replaced. Refer to Figures 13 thru 15.



Be careful not to nick the wire insulation of the conductor or damage the tool tip during tool tip insertion.



Figure 13



Figure 14



Figure 15

6. Fold the braid back up, over the rear of the connector body and comb out in a uniform pattern over the knurled portion. The braid is then terminated to the connector shell with a CRES-Lock band strap (BND-0812-S) applied with a Micro Tie-Dex II, A30199 hand tool.

Prepare the band for termination by looping the end, through the buckle slot twice to create a double wrap slightly larger than the back of the connector shell (approximately 15.88 mm [.625 in.]). Insert the free end of the strap into the tool termination slot such that the looped portion of the band faces down and the buckle is approximately flush with the tool face.

Slide the band along the shield so that it is located within the knurled portion of the shell. Tighten the band by repeatedly squeezing the ratchet handle until it locks against the tool body.

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Trim the excess band by squeezing the cutoff handle until the band shears off. Remove the excess band from the tool by depressing the release handle and pulling it free. Trim the excess braid flush with the forward lip of the connector shell at the end of the knurled portion with side cutters. Refer to Figures 16 thru 22. For further information on terminating band straps, refer to Installation Procedure ELE-3COP-375.



Figure 16



Figure 17



Figure 18



Figure 19



Figure 20



Figure 21

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Figure 22

7. Position the heat shrink boot over the terminated braid such that the lip end of the boot extends beyond the raised rib on the connector shell. Apply heat to the front of the boot uniformly until it shrinks down and the boot lip engages the raised rib on the connector.

Continue to apply uniform heat to the boot, working back along its length until it is completely recovered over the connector body and cable jacket. Refer to Figures 23 thru 25. Additional application instructions are included on the heat shrink boot packaging.



Figure 23



Figure 24



Figure 25

8. EMI shielding can be maximized through an application of a braid sock termination to the connector back shell in lieu of termination of the cable shield directly to the connector. Follow the cable preparation and contact crimp and assembly procedures of Steps 1 thru 4, except strip back the cable jacket braid so that approximately 6.35 mm [.25 in.] is exposed.

Cut a piece of braid sock to approximately 28.58 mm [1.125 in.] in length and position it so that one end over-laps the exposed cable braid and the other end extends over the knurled portion of the connector back shell.

Position a solder sleeve over the braid sock and cable so that the solder ring of the solder sleeve is in the area where the braid sock and cable braid over-lap. Apply the solder sleeve with a heat gun go that the solder ring completely reflows. Refer to Raychem RCPS-100-70 installation procedure for solder sleeve termination. Complete the termination of the braid sock to the connector shell with a band strap and apply a heat shrink boot per Steps 6 and 7. Refer to Figures 26 thru 28.



Figure 26

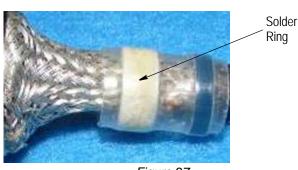


Figure 27

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Figure 28

2. REVISION SUMMARY

Reflowed Solder Ring

• Initial release of document

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