

Installation Instructions: K656DCY, K656DCH and K656DI Deadbreak Receptacles with Direct Access Port

CONTENTS: Receptacle housings; Cable adapters; I, Wye or H Center sections; Aluminum holding collars; Lubricant Hex-head bolts; Crimp connectors; Belleville washers; Flat washers; Hex wrench; Nylon venting rod; Lubricant; Installation instructions; Crimp Chart.

The 655/656DCY and K655/K656DCY three way wye splices, the 655/656DCH and K655/K656DCH four way splices and the 655/656DI and K655/K656DI two way splices are designed to splice and tap solid dielectric type cables rated for 600 ampere at 15kV and 25kV respectively. They feature an access port for direct voltage measurement when used with an appropriate meter and test cap.

DANGER

All apparatus must be de-energized during installation or removal of part(s).

Do not touch or move energized products in the work area.

These instructions do not attempt to provide for every possible contingency.

Failure to follow these instructions will result in damage to the product and serious or fatal injury.

This product should be installed only by competent personnel trained in good safety practices involving high voltage electrical equipment. These instructions are not intended as a substitute for adequate training or experience in such safety practices.

All apparatus must be installed and operated in accordance with individual user, local and national work rules and electrical standards.

If this product is supplied with a protective shipping cover(s), remove this shipping cover(s) and replace with the appropriate HV insulated cap(s) or connector(s) before submerging or energizing the circuit.

Inspect parts for damage, rating and compatibility with mating parts.

Excess distortion of the assembled product may result in its failure.

DANGER - DIRECT ACCESS PORT

The elbow access port provides direct access to the cable conductor. Contact with the uncovered port or insertion of objects other than the insulated cap or voltage test cap can cause serious or fatal injury. Removal of the insulated cap and installation of the voltage test cap must be done with a hotstick tool following instructions packaged with the voltage test cap.

FOR MORE INFORMATION ON PARTS, INSTALLATION RATINGS AND COMPATIBILITY, CALL THE NEAREST ELASTIMOLD® OFFICE. These instructions illustrate the installation of one leg of the "I", "Y" or "H" connector. A complete installation requires repeating the instructions for the total number of cable required (two for the "I", three for the "Y" and four for the "H").

These instructions are applicable to concentric neutral cables and flat metallic shielded cable with semi-con shield. For installation on other cable constructions call the nearest Elastimold office.

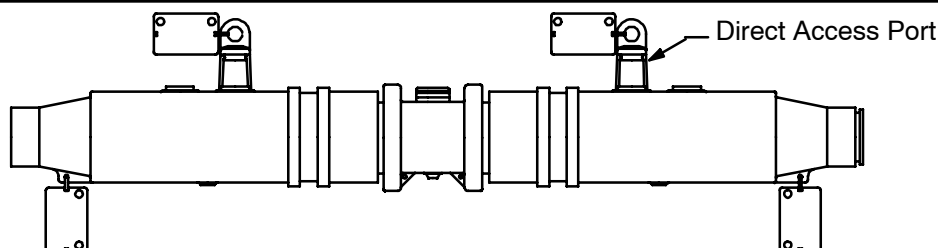
Limited Warranty:

1. T&B warrants that its products will be free from defects in materials or workmanship for a period of two (2) years, except for tools which are warranted separately (see warranty accompanying those products). Fisher Pierce® products and Elastimold® Reclosers are warranted for three years; and Joslyn™ VBT and VBU capacitor switches are warranted for four years or 40,000 operations whichever occurs first. Upon prompt notification of a warranted defect, T&B will, at its option, repair or replace the defective product.
2. In no event shall T&B be liable for any consequential, indirect or special damages, nor will T&B be liable for transportation, labor, or other charges arising out of the removal or reinstallation of its products. Liability for breach of warranty is limited to the cost of repair or replacement of the warranted product only.
3. Misuse, misapplication or modification of T&B products immediately voids all warranties.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES AND REMEDIES, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE SPECIFICALLY DISCLAIMED.

IMPORTANT

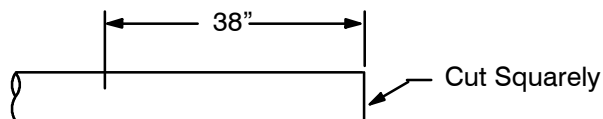
1. Check contents of package to ensure they are complete and undamaged.
2. Check all components to ensure proper fit with cable and/or mating products.
3. Read entire installation instructions before starting.
4. Have all required tools at hand and maintain cleanliness throughout the procedure.



GENERAL INSTRUCTIONS

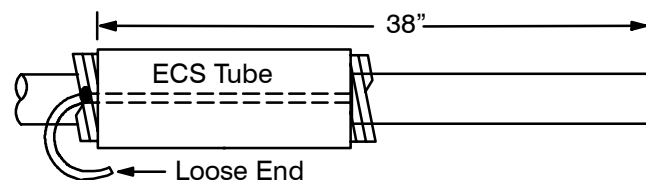
STEP 1

Wipe the outer jacket clean a distance of 38".
IMPORTANT: To ensure maximum available length for crimp growth, cut cable end square.



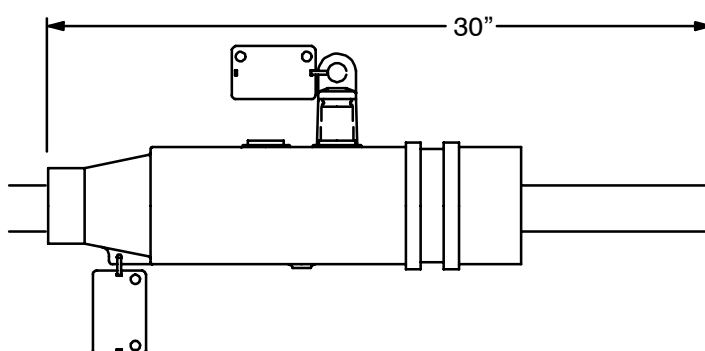
STEP 2

If an ECS sealing device is being used. Slide the tube on to the cable a distance of 38".



STEP 3

Slide receptacle housing onto the cable a distance of 30".



STEP 4

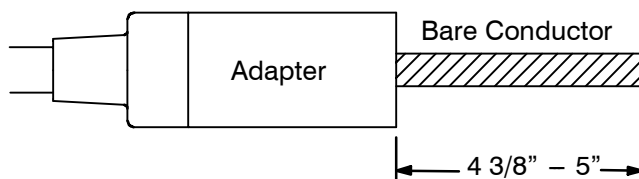
REFER TO THE SPECIAL CABLE PREPARATION SUPPLEMENT INCLUDED WITH THESE INSTRUCTIONS AND FOLLOW THE PROCEDURE FOR THE TYPE OF CABLE BEING USED.

PART A - Jacketed Concentric Neutral Cable (page 5)

PART B - Flat Metallic Tape Shielded Cable with Semi-con Shield (page 6)

STEP 5

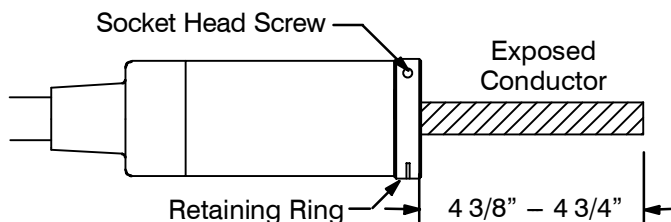
Remove any protruding cable insulation by cutting it even with the end of the cable adapter. Do not cut or nick the cable adapter or the conductor. The length of exposed conductor should be $4 \frac{3}{8}$ " - 5". Otherwise redo assembly.



STEP 6

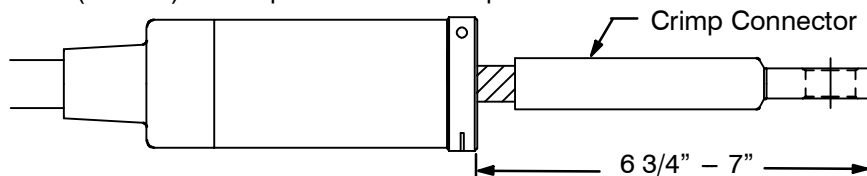
Assemble aluminum retaining ring over conductor and snug firmly against cable adapter. Using the hex wrench provided, tighten the socket head screw hand tight.

Confirm the exposed conductor measures $4 \frac{3}{8}$ " to $4 \frac{3}{4}$ ". Otherwise redo assembly.



STEP 7

Remove the protective cap from the crimp connector. If using aluminum cable, wire brush the conductor and immediately fully insert into the crimp connector which contains inhibitor. Measure the distance from the end of the connector to the retaining ring. If the distance is over 7" (17.8cm) do not proceed. Redo all previous work.

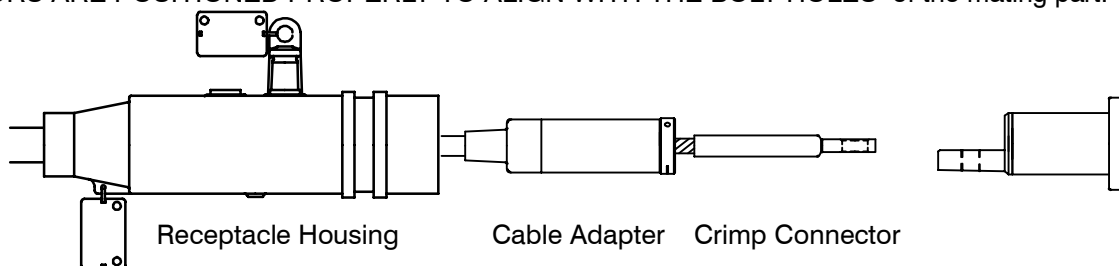


STEP 8

Repeat Steps 4 (page 2) through 7 for the remaining cables to be joined.

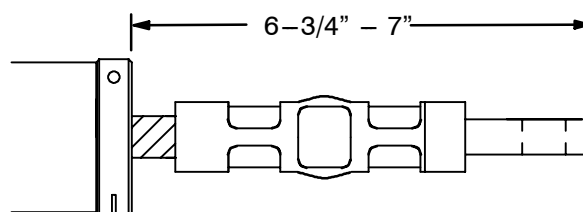
STEP 9

Prior to crimping connector, confirm components are positioned as shown below. CONFIRM BOLT HOLES IN THE CRIMP CONNECTORS ARE POSITIONED PROPERLY TO ALIGN WITH THE BOLT HOLES of the mating part.



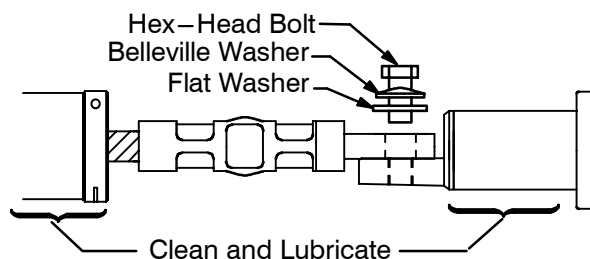
STEP 10

Crimp each connector following the instructions packaged with the connectors. *Rotate each crimp 90 or 180 degrees. After crimping, measure the distance from the end of the connector to the holding collar. If the distance is over 7" do not proceed. Redo all previous work.*



STEP 11

Assemble the washers and bolt in the following order: flat washer against spade contact, Belleville washer (concave side down), hex-head bolt. Hand tighten. The splice and cables are now in their final positions. *Do not attempt to move or reposition any part of the assembly after the bolts are tightened.*



STEP 12

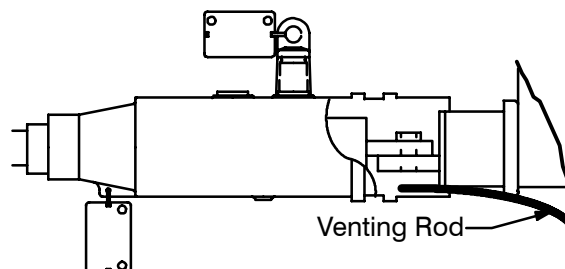
Using a torque wrench with a 15/16" socket, tighten each bolt to 50 to 60 ft. lbs.

STEP 13

Apply supplied lubricant or ELASTIMOLD approved lubricant generously to the outside of the cable adapter, the area of the splice section as shown in step 11 and the inside mating surface of the receptacle housing.

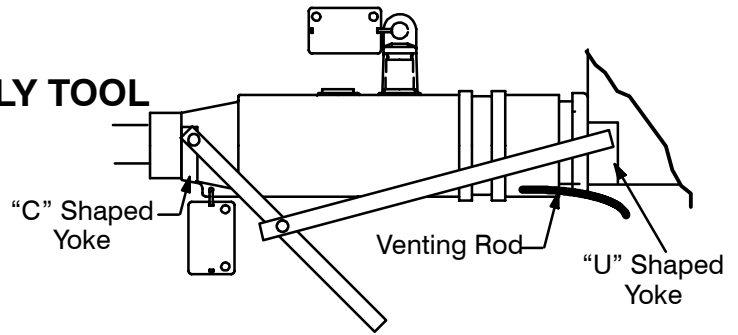
STEP 14

Slide the receptacle housing over the cable adapter and up to the edge of the interface (position shown). Insert the nylon venting rod (supplied).



STEP 15A - USING THE 650ATY ASSEMBLY TOOL

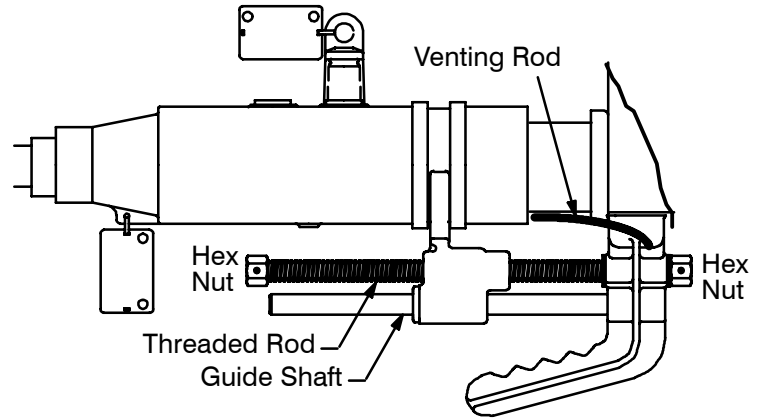
Attach the 650ATY assembly tool as shown. Make sure "U" shaped yoke is over the splice section and the "C" shaped yoke is over the receptacle housing. With the assembly tool in place, slowly raise the handle to slide the receptacle housing over the splice section. Remove the venting rod.



STEP 15B - USING THE 600RRT ASSEMBLY TOOL

Place the 600RRT assembly tool as shown. Slide the receptacle housing over the interface by turning the hex nut on either nut of the tool. Remove the venting rod.

WARNING: DO NOT place hand on threaded rod or guide shaft with the assembly tool in place.



STEP 16

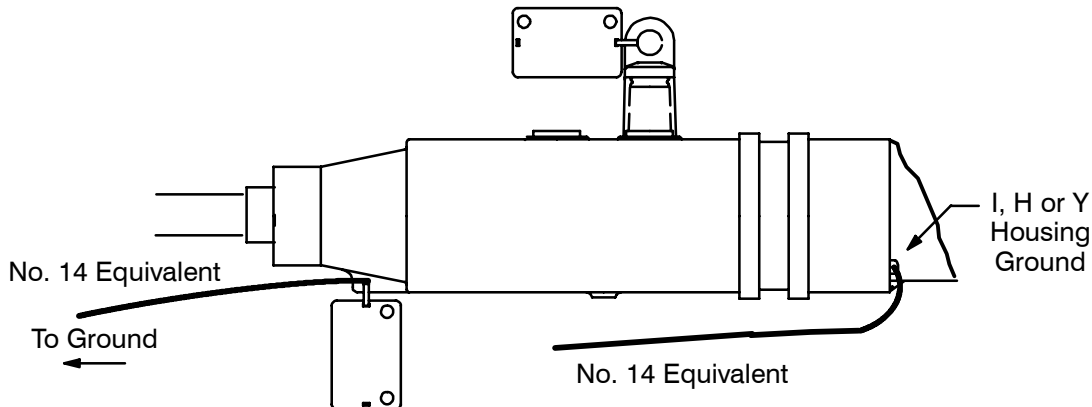
Repeat Steps 13 through 15 for the remaining cables.

STEP 17

Check all cable adapters to make sure they are located properly and remove all vinyl tape markers.

STEP 18 - Grounding

1. Complete installation of ECS grounding device according to the instructions included with the grounding device.
2. Connect a short length of wire (No. 14 AWG, copper or equivalent) to the grounding eyes of the housings. Make a small loop and twist tightly, taking care not to damage the eye.



STEP 19 - Direct Test

To perform a direct test a specific meter and test cap is required as shown.

The operating instructions for voltage measurement are included with the meter and test cap.

DANGER: NOT following these instructions or insertion of objects other than the test cap can cause serious or fatal injury.

Meter	Test Cap
h/d Mark I thru 1X Voltmeter/phaser	200TC-1
Ross Meter Hi-Z VM25SE A/VMP25B	200TC-2

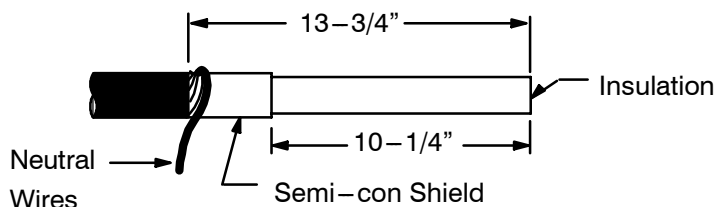
PART A

The jacket removed and neutral wire bending distances are required if a 200 or 600 ECS kit is being installed. If a different grounding device is to be used, jacket removal and neutral wire training may be different. Refer to instructions packaged with that grounding kit.

Jacketed Concentric Neutral Cable

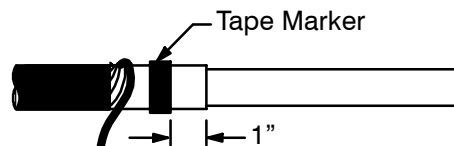
STEP 1

From the end of the cable, measure 13-3/4" and remove the cable jacket to that point with a straight smooth cut. Take care not to damage the neutral wires. Bend the neutral wires back and out of the way. From the end of the cable, measure 10-1/4" and remove the semi-con from the insulation with a straight, smooth, "squared" cut. *Take care not to cut or nick the insulation.*



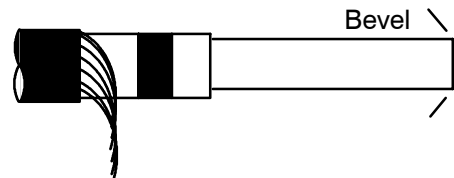
STEP 2

At a point 1" from the end of the semi-con shield wrap two turns of tape to serve as a marker.



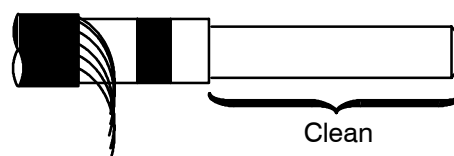
STEP 3

Bevel the end of the insulation at a 45 degree angle, approximately 1/4" back.



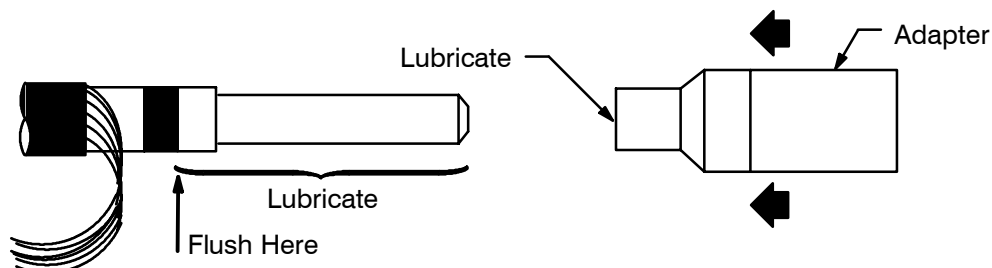
STEP 4

Thoroughly clean the insulation to remove all traces of semi-conducting residue. This may be done by wiping with a rag soaked with an approved safety solvent. Always wipe from the end of the cable toward the outer jacket.



STEP 5

Apply supplied lubricant or ELASTIMOLD approved lubricant sparingly along cable as shown. Lubricate the inside of the cable adapter. Slide the adapter, small end first, over the cable with a twisting motion until the end of the adapter is *flush* with the tape marker.



STEP 6

Return to Steps 5 (page 2) through 18 of the General Instructions.

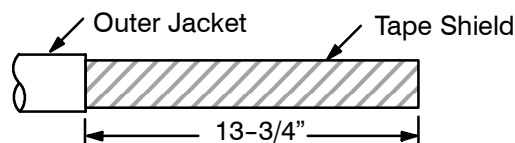
PART B

The jacket and tape shield removal distances are required if a 200 or 600 ECS-G3 kit is being installed. If a different grounding kit is being used, jacket and tape shield removal may be different. Refer to instructions packaged with that grounding kit.

Flat Metallic Tape Shielded Cable with Semi-con Shield

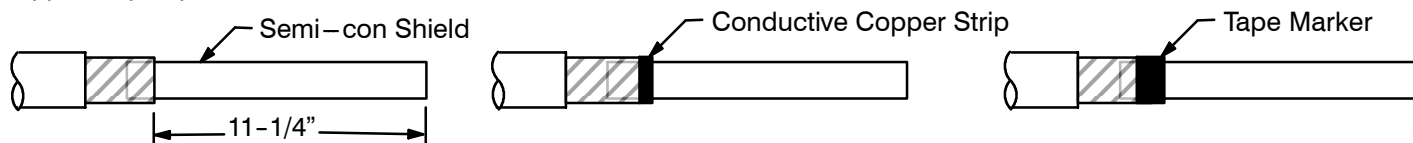
STEP 1

From the end of the cable measure 13-3/4" and remove the outer jacket to that point with a straight, smooth "squared" cut. *Take care not to cut or damage the tape shield.*



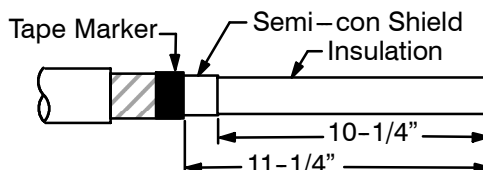
STEP 2

Measure 11-1/4" and remove the tape shield to that point. Wrap conductive copper strip around the edge to keep the copper tape shield in place. Wrap two turns of tape over the end of the tape shield and conductive copper strip, with the edge of the tape 11-1/4" from the end of the outer jacket. The tape serves as an extra support to keep the tape shield and conductive copper strip in place and also serves as a marker.



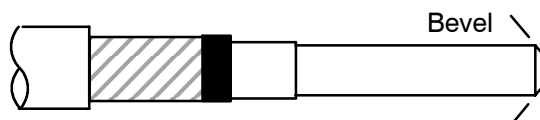
STEP 3

Measure 10-1/4" and remove the semi-con shield to that point with a straight, smooth, "squared" cut. *Take care not to cut or nick the insulation.*



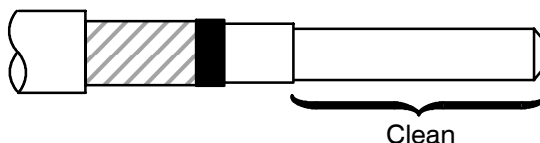
STEP 4

Bevel the end of the insulation at a 45 degree angle, approximately 1/4" back.



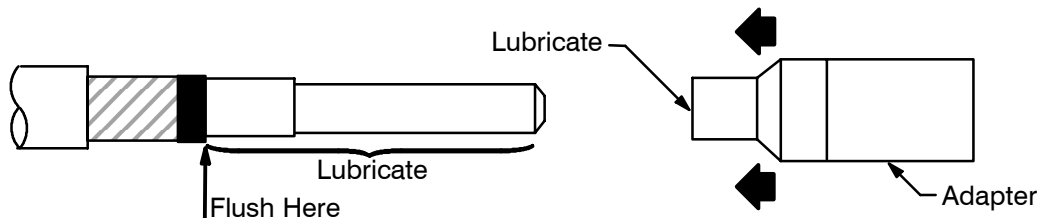
STEP 5

Thoroughly clean the insulation to remove all traces of semi-conducting residue. This may be done by wiping with a rag soaked with an approved safety solvent. Always wipe from the end of the cable toward the outer jacket.



STEP 6

Apply supplied lubricant or ELASTIMOLD approved lubricant sparingly along cable as shown. Lubricate the inside of the cable adapter. Slide the adapter, small end first, over the cable with a twisting motion until the end of the adapter is *flush* with the tape marker.



STEP 7

Return to Steps 5 (page 2) through 18 of the General Instructions.

THOMAS & BETTS CORP. PROPRIETARY AND CONFIDENTIAL

BY ACCEPTANCE OF THIS DOCUMENT YOU AGREE THAT ALL RIGHTS TO THE DRAWINGS AND INFORMATION CONTAINED IN IT, AS WELL AS THE SUBJECT MATTER AND ALL PROPRIETARY AND NOVEL FEATURES DISCLOSED, ARE OWNED BY THOMAS & BETTS CORPORATION ("THE COMPANY" AND A MEMBER OF THE ABB GROUP) AND THAT DEVICES EMBODYING SUCH FEATURES OR INFORMATION DERIVED FROM THESE DRAWINGS WILL NOT BE MANUFACTURED BY OR FOR YOU OR DISCLOSED TO OTHERS WITHOUT THE PRIOR EXPRESS WRITTEN CONSENT OF THE COMPANY. THESE DRAWINGS ARE NOT TO BE COPIED OR REPRODUCED OR DISCLOSED TO OTHERS WITHOUT THE PRIOR EXPRESS WRITTEN CONSENT OF THE COMPANY. ALL DRAWINGS AND INFORMATION ARE TO BE RETURNED TO UPON DEMAND OR UPON COMPLETION OF PURPOSE FOR WHICH LENT. COPYRIGHT THOMAS & BETTS CORP. ALL RIGHTS RESERVED. ALL OTHER TRADEMARKS ARE THE PROPERTY OF THEIR RESPECTIVE OWNERS.