

## IS635BT - Deadbreak Connector

600/900A

### Description

The Hubbell 600 A Deadbreak T-body Connectors are designed to terminate underground cables and provide a connection to transformers, switches, sectionalizing cabinets, and a means to create modular splices. These components conform to all requirements of IEEE Std. 386 and are designed to mate with all other manufacturer's products that also conform to IEEE Std. 386, Interface 13.

- 35 kV Class 21.1 kV Line to Ground

### Installation Tools

- Hand Tools
- Crimp Tools & Dies
- Torque Wrench

### Contents of Package

- |                              |                                   |
|------------------------------|-----------------------------------|
| (1) T-body Housing           | (1) Cable Adapter                 |
| (1) Insulating Plug with Cap | (1) Stud                          |
| (1) Connector                | (1) Instructions                  |
|                              | (1) Lubricant (DO NOT SUBSTITUTE) |



**Check contents of box to ensure that it is complete and components are NOT damaged. A shield adaptor may be required for certain power cables.**

**Important:** Read these instructions thoroughly before operating the system. Be sure that the connectors are rated for the intended energized use. (See Hubbell catalog (C7) for selecting the correct mating product.) For additional information, you may want to reference IEEE Std. 1816, Guide for Preparation Techniques of Extruded Dielectric, Shielded Cables Rated 2.5 kV through 46 kV and the Installation of Mating Accessories.

### **DANGER**

The equipment covered by these instructions should be installed, operated and serviced only by competent personnel familiar with safety practices. This instruction is written for such personnel and is not intended as a substitute for adequate training and experience in safe procedures for this type of equipment.

### **DANGER**

Optional Capacitive Test Point- When making voltage measurements, the area of and around the voltage test point must be dry and free of contaminants. The voltage test point is not intended for actual voltage measurements or phasing operations and has no direct connection to the conductor. It uses an impedance capacitance tap and only voltage indicating instruments designed for this application to establish the presence of voltage should be used. A voltage reading will indicate the presence of voltage, but a reading of no voltage is not sufficient to establish a de-energized circuit before touching the connector. Other procedures should be implemented to establish a de-energized circuit.

## ⚠ WARNING ⚠

Do not touch or move energized product by hand. Failure to follow this instruction may result in serious or fatal injury, as well as damage to the product.

*These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to Hubbell Power Systems, Inc.*

## Cable Preparation

These instructions will cover concentric neutral cable applications so please refer to cutback instructions from shield adapter kits for steps on how to prepare other typers of underground power cables.

### Step 1 - Train & Remove Jacket

- A. Train the cable into the final assembled position using the natural bending of the cable. Allow sufficient slack in the cable to move the T-body at least a foot from the apparatus bushing.
- B. To provide sufficient length of concentric neutral conductor for grounding after installation, measure 14 3/4" down the cable from the centerline of the bushing interface and remove the jacket to this distance. Care should be taken not to damage neutral wires. (See Figure 1.)
- C. Bend neutral wires out of the way.

### Step 2 - Cable Preparation

- A. Cut the excess cable off square 13" above jacket. (See Figure 2.)
- B. Remove insulation to expose bare conductor. Cut squarely making sure not to cut or nick the conductor. Compression lugs "X" = 4 1/2" Shear Bolt lugs "X" = Depth of Lug (See Figure 4.)
- C. Remove the insulation shield 10-1/2" back from the end of the cable. Cut squarely, making sure not to nick or damage the insulation.
- D. Apply two layers of vinyl tape onto the insulation shield 11-1/2" back from the end of the cable. This will serve as a temporary marker for locating the cable adapter. (See Figure 5.)
- E. Bevel the insulation end 1/8" max. Thoroughly clean the insulation.

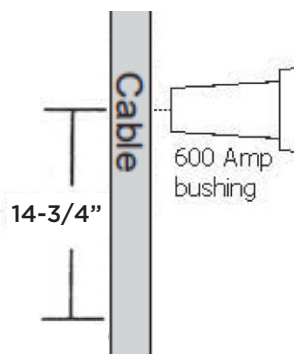


Fig. 1 - Cable Train & Outer Jacket Removal

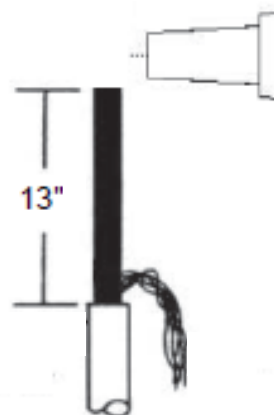


Fig. 2 - Cut Excess Cable

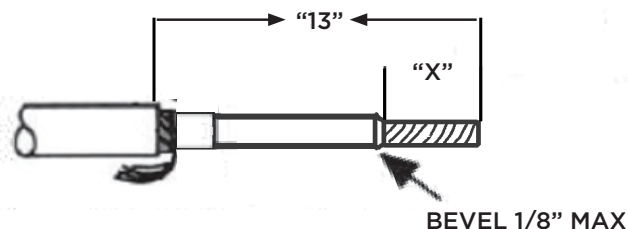


Fig. 4 - Insulation Cut Back

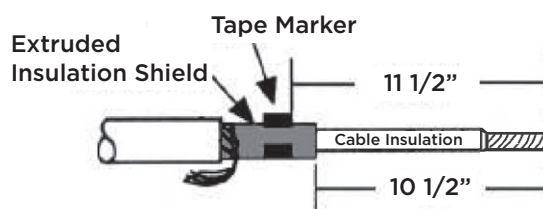


Fig. 5 - Shield Cutback

# Installation

The end of the jacket should be sealed to prevent water ingress into the housing. It is recommended to use commercially available products to reconstruct the cable jacket.

## Step 3 - Cable Adapter Installation

- A. Apply a thin, uniform coating of the supplied lubricant to the bore of the cable adapter and the cable insulation. DO NOT SUBSTITUTE as other lubricants may be harmful to products.
- B. Slide cable adapter onto cable until it is flush with the tape marker. (See Figure 6.)

## Step 4 - Lug Installation

- A. Use a wire brush to clean the exposed conductor and immediately install the lug. Rotate the lug to spread the inhibitor.
  - 1) Compression Lug
    - a. Verify check dimension is less than 6 1/2" prior to crimping. (See Figure 7.) Refer to crimp chart packed with lug.
    - b. Measure check dimension after crimping to verify it is between 6 1/2" and 7 1/4". (See Figure 8.)
  - 2) Shear Bolt Lug
    - a. Refer to installation instructions packed with Shear Bolt lug.

**Note:** Ensure lug will sit flat against the face of the equipment bushing before crimping or shearing

## Step 5 - T-Body Installation

- A. Clean and lubricate the cable entrance of the T-Body and the outside of the cable adapter with supplied lubricant.(See Figure 9.)
- B. While holding the cable adapter in place and making sure the connector is properly aligned, slide the t-body housing onto the cable assembly. The housing should bottom out onto the connector. Verify that the cable adapter did not move and is still flush with the tape marker. If the adapter moves, pull it back up a few inches, reapply silicone lubricant to the cable insulation, and reposition until it is again flush with the tap marker. (see Figure 10.)
- C. Remove tape marker.

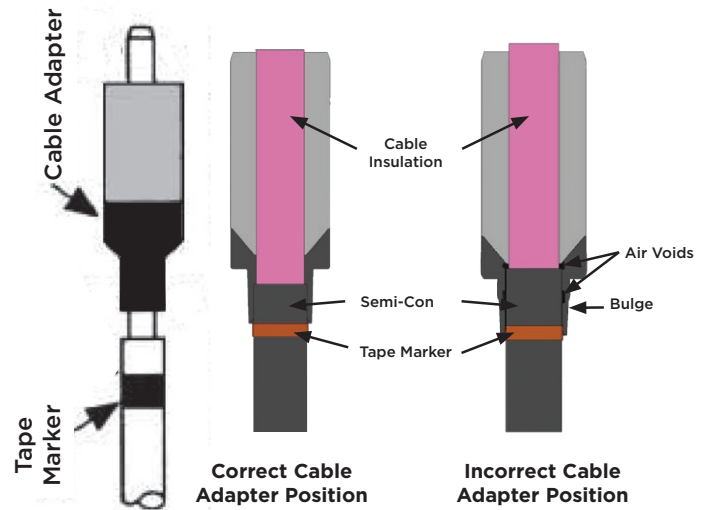


Fig. 6 - Install Cable Adapter

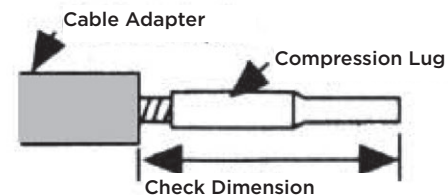


Fig. 7 - Check and Crimp

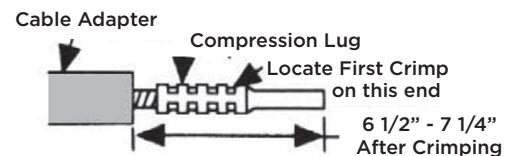


Fig. 8 - Final Crimp Dimensions

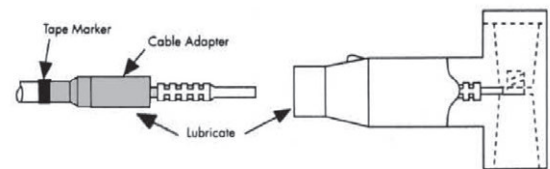


Fig. 9 - Clean and Lubricate

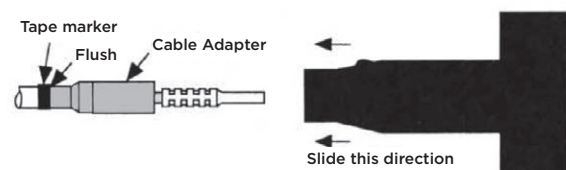


Fig.-10 - Assemble T-Body

## Connection

For kits with reducing taps or modular splice kits, please refer to supplemental instructions packaged with those components.

### Step 6 - Connection

- A. Clean and lubricate the T-Body, apparatus bushing, and insulating plug interfaces with supplied lubricant.
- B. Hand tighten the loose stud into the insulating plug two or three turns if the mating interface is not equipped with one.
- C. Align the T-Body to the apparatus bushing interface. Insert the insulating plug and hand tighten to prevent cross-threading. Tighten the insulating plug to 50-60 ft-lbs of torque using a 1" socket and a torque wrench. (See Figure 11.)
- D. Clean and lubricate the test point cap and snap it onto the insulating plug.

### Step 7 - Grounding

- A. Attach a #14 AWG copper wire (or equivalent) to the grounding eye of the T-body. Twist the wire at least two turns to ensure it is secured properly. Attach the free end to system ground.
- B. Twist the neutral wires into a braid and connect to system ground with appropriate connector. Make sure to provide sufficient slack in ground braid to provide for future operation. (See Figure 12.)

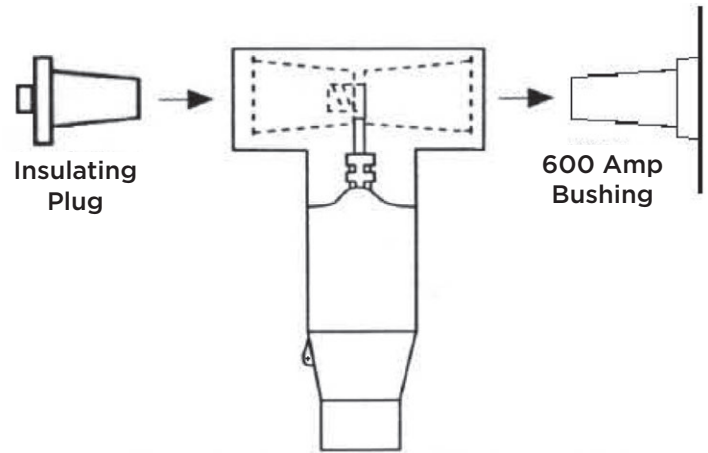


Fig. 11 - Assembly to Bushing Well

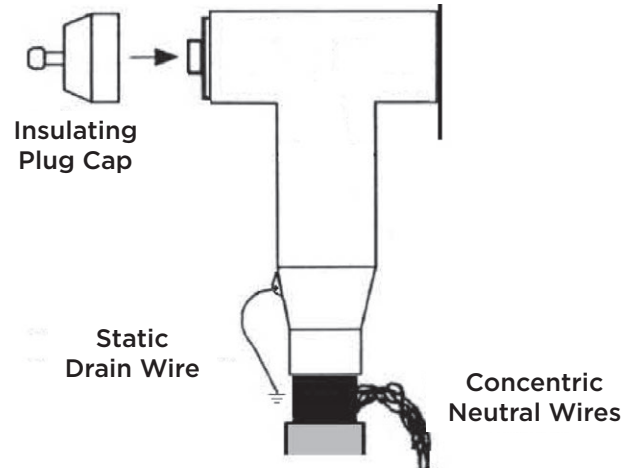


Fig. 12 - Final Steps

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