

# Installation Instructions: 650/675 ETP (1) Elbow Tap Plug

**CONTENTS:** Tap Plug, Lubricant (DO NOT SUBSTITUTE), Stud (if supplied), Installation Instructions.

The 650/675 ETP has a voltage rating of 15kV (8.3kV line-to-ground and 14.4kV line-to-line) and is designed to provide a 200 ampere loadbreak tap at system voltage as indicated on the ETP. A yellow band provides indication of full seating. This product is identified by a white band.

**WARNING: THE AVAILABLE FAULT CURRENT MUST BE LIMITED TO 10,000 AMPERES WHEN USING THIS PRODUCT.**

**WARNING: THE FOLLOWING RATINGS APPLY TO THIS PRODUCT:**

**600 Ampere Deadbreak Interface:** 650ETP(1)–600 ampere load current and 25,000 amperes short circuit current for 10 cycles.

675ETP(1)–900 ampere load current and 25,000 amperes short circuit current for 10 cycles.

**200 Ampere Loadbreak Interface:** 200 amperes load current and 10,000 amperes fault–close current. For higher short circuit current: 1) this interface must only be operated de-energized; and 2) elbows used for taps or grounding must be adequately secured such as with a bail.

## 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.

FOR MORE INFORMATION ON PARTS, INSTALLATION RATINGS AND COMPATIBILITY, CALL THE NEAREST ELASTIMOLD® OFFICE.

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

For loadbreak products follow operating instructions. All deadbreak connectors must be de-energized before operating. All 200A deadbreak connectors must be mechanically secured with bails when connected.

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.

## 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

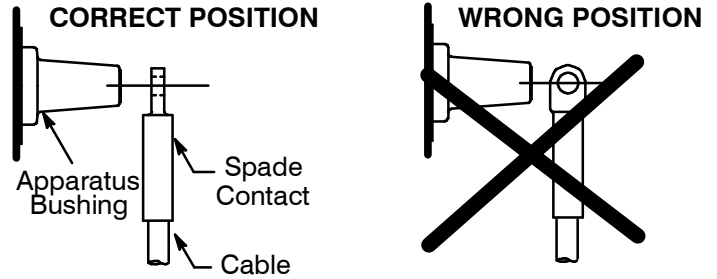
1. Check contents of package to ensure they are complete and undamaged.
2. Check all components to ensure proper fit with cable and/or mating products.
3. Read entire installation instructions before starting.
4. Have all required tools at hand and maintain cleanliness throughout the procedure.



A Member of the ABB Group

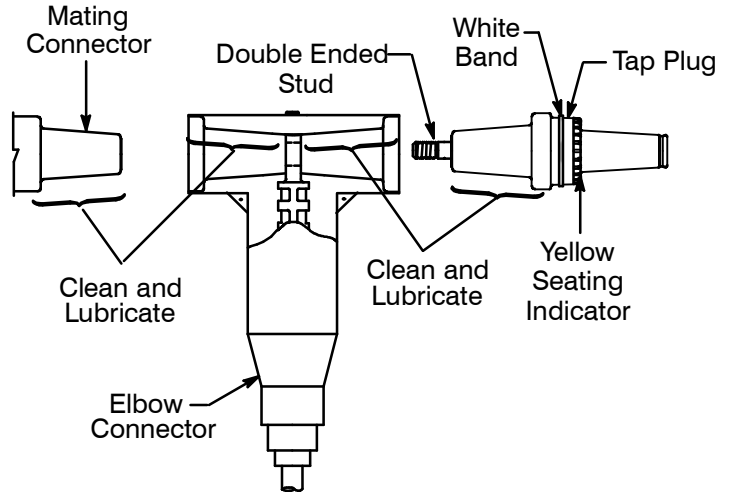
## STEP 1

Prepare cable using spade contact and install elbow according to the (K)650LR or 750LR installation instructions. **Before crimping, align spade contact on cable so that it lies flat on the apparatus bushing contact.**



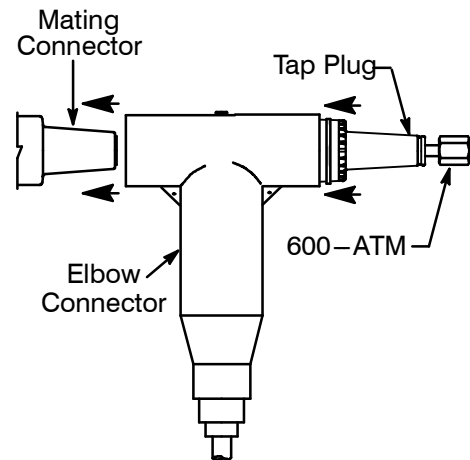
## STEP 2

1. Remove the protective caps from the elbow connector and the tap plug.
2. Tighten by hand double ended stud (if applicable) into the tap plug.
3. Clean, then lubricate the entire mating connector interface, elbow connector interfaces and the tap plug as noted with the lubricant supplied or ELASTIMOLD approved lubricant.



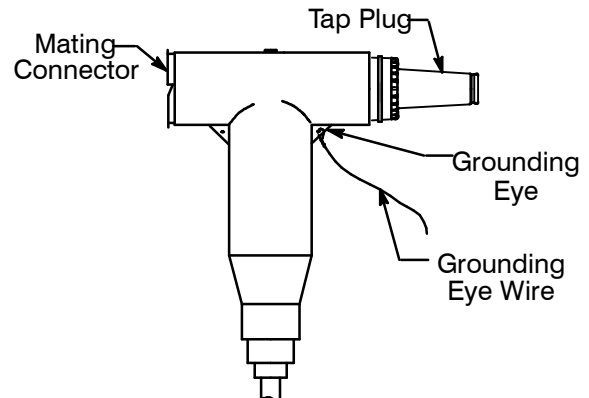
## STEP 3

1. Assemble elbow connector on mating connector.
2. Assemble the tap plug into the elbow connector.
3. Insert the drive adapter into the tap plug. Turn in a clockwise direction while pushing the elbow and tap plug toward the mating connector.
4. Continue to rotate the drive adapter clockwise, with the appropriate tool to a torque of 50–60 ft–lbs. Remove the drive adapter from tap plug.



## STEP 4

Insert one end of a length of #14AWG copper wire (or equivalent) through the grounding eye of the elbow, leaving sufficient length to allow movement of the elbow if required. Make a small loop and twist tightly, taking care not to damage the eye.



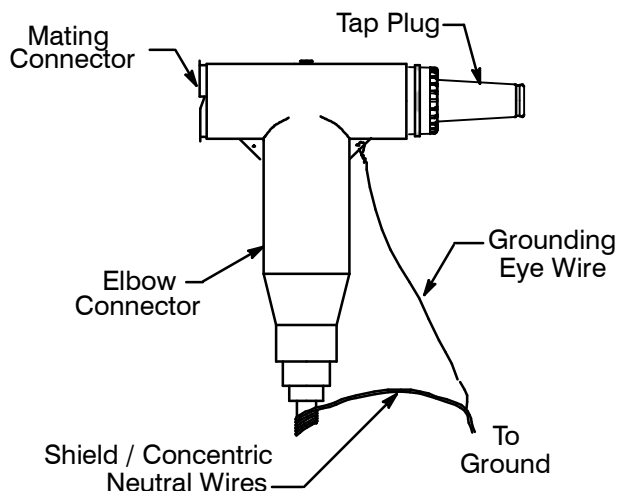
## STEP 5A FOR CONCENTRIC WIRE SHIELDED CABLE

Twist the shield wires together. Connect them and the grounding eye wire to ground using an appropriate connector.

Leave sufficient length to allow movement of the elbow if required.

*For three-phase installations, all grounds from all three phases must be tied to a common ground point.*

If cable is jacketed, install appropriate waterproofing at jacket terminus to prevent moisture from entering.

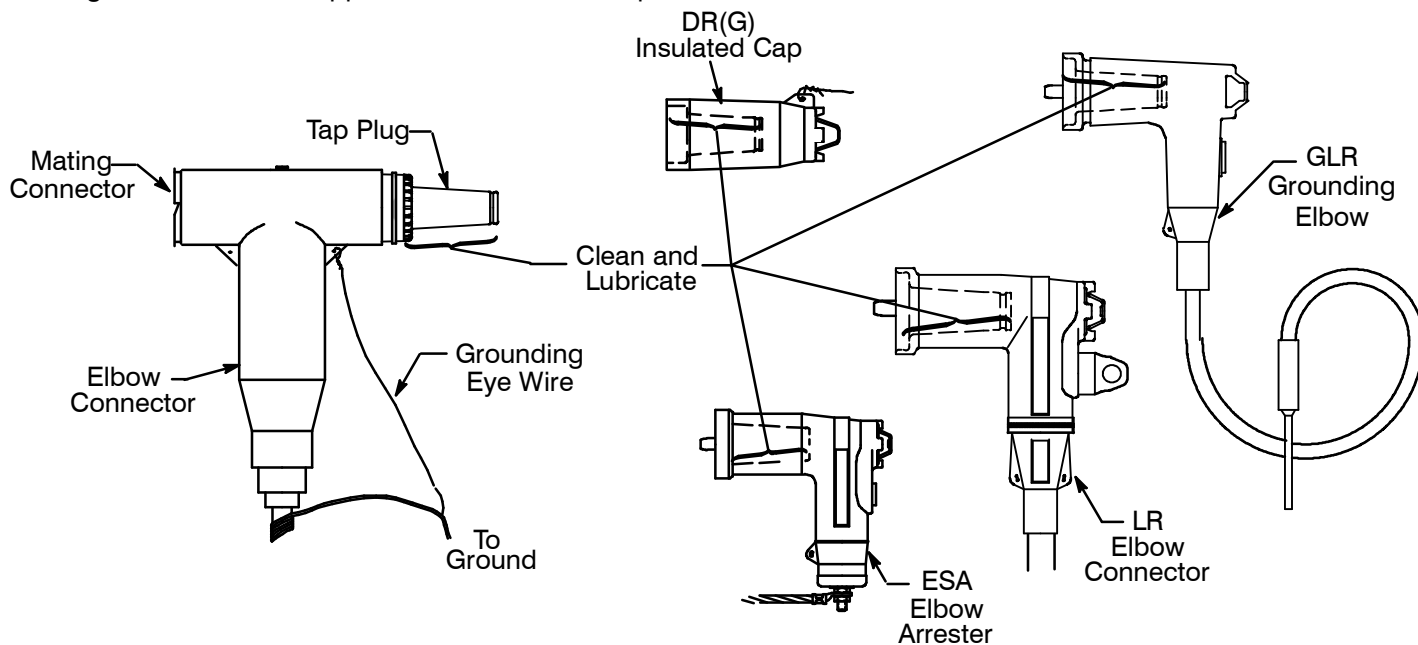


## STEP 5B METALLIC TAPE SHIELDED CABLE

Connect the metallic shield of the cable to ground using a jumper of equivalent ampacity to the metallic shield. Install appropriate waterproofing at jacket terminus to prevent moisture from entering. Connect the elbow connector grounding eye wire to ground.

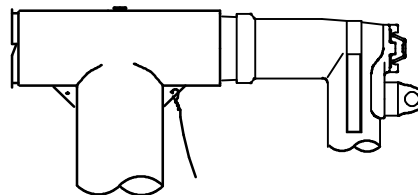
## STEP 6

Clean and lubricate the entire tap plug interface and either a DR(G), ESA, GLR or LR of the appropriate voltage class with the lubricant supplied or ELASTIMOLD® approved lubricant. Install the DR(G), ESA, GLR or the LR to the tap plug interface following the instructions supplied with each of these products.



## STEP 7 SEATING INDICATION

Complete assembly of an insulated cap or elbow is indicated by no portion of the yellow band being visible when viewed from the side.



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