

# Installation Instructions: 252LR - Deadbreak Elbow Connectors

**CONTENTS:** Elbow Connector Housing, Compression Lug, Probe, Probe Contact, Wrench, Lubricant, Hold-down Bail, Installation Instructions.

The 252LR is designed to terminate UD jacketed and non jacketed cable having concentric neutral wires or copper tape shielding. The elbow provides a voltage test point and an operating interface for connecting to an 12/20 (24)kV 250 ampere deadbreak bushing or accessory device. When other types of UD cable are to be terminated, an appropriate Elastimold cable shield or grounding device must be used.

## 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.**

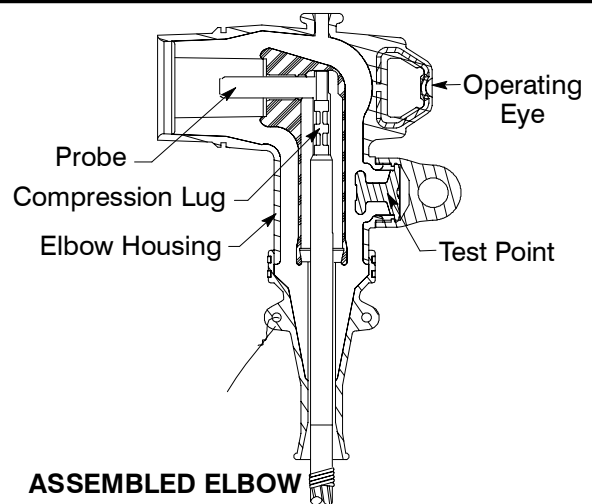
## Limited Warranty:

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.

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## IMPORTANT

1. Read entire installation instruction before starting.
2. Check contents of package to ensure they are complete and undamaged.
3. Check elbow housing cable entrance size and compression lug size to ensure proper fit with cable.
4. Check threads by threading probe into compression lug. If resistance is encountered prior to full assembly, check for damage and replace damaged component.
5. Unit Must be Bailed.
6. Have all required tools at hand and maintain cleanliness throughout the procedure.



**ASSEMBLED ELBOW**

**Caution:** If test point cap is not installed, lubricate cap and test point and install cap.

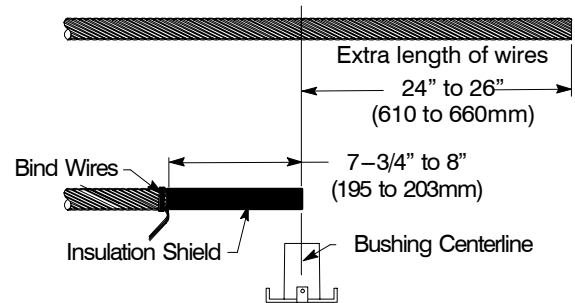
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## STEP 1 CABLE TRAINING AND PREPARATION

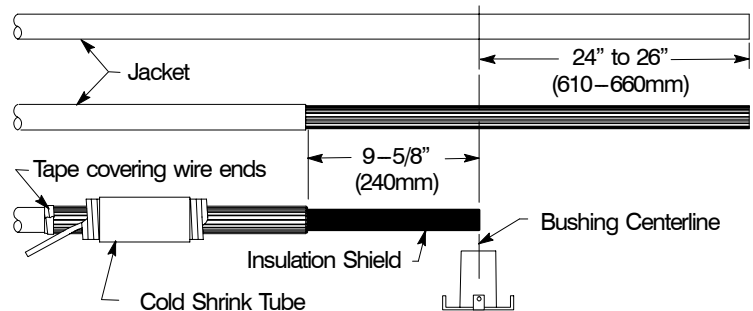
### A. NON JACKETED CONCENTRIC NEUTRAL CABLE

1. Train cable to ensure slack for ease of operation.
2. To facilitate connection of the neutral to the tank ground and hotstick operation, an extra length of concentric neutral wires or grounding braid wire is required.  
Select desired method:  
1. Pull extra cable to 24-26" (610-660mm) beyond centerline of bushing and bind neutrals 7 3/4 to 8" (195-203mm) further back from center of bushing.
2. Connect neutral wires to tank ground with jumper or braid.
3. Unwrap the neutral wire to the binding.
4. Cut excess cable squarely at the centerline of the bushing.
5. Step 2 to complete the installation.



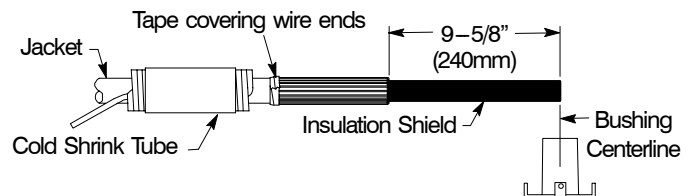
### B. JACKETED CONCENTRIC NEUTRAL CABLE

1. Train cable to ensure slack for ease of operation.
2. To facilitate connection of the neutral to the tank ground and hotstick operation, an extra length of concentric neutral wires or grounding braid wire is required.  
Select desired method:  
1. Pull extra cable to 24-26" (610-660mm) beyond centerline of bushing, place tape mark at centerline of bushing. Remove outer jacket 9 5/8" (240 mm) further back from tape mark.
2. Connect neutral wires to tank ground with jumper or braid.
3. Unwrap the neutral wire back past the bushing centerline.
4. Cut excess cable squarely at the centerline of the bushing.
5. If using a 200ECS sealing kit, slide the cold shrink tube onto the cable beginning at the loose end.
6. Step 2 to complete the installation.



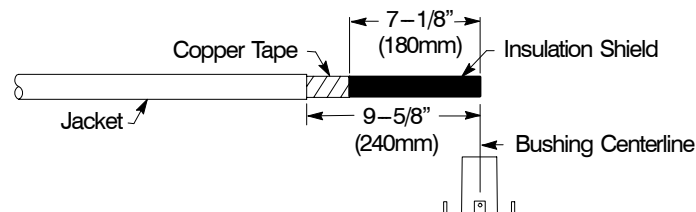
### C. JACKETED CABLE WITH DRAIN WIRES

1. Cut the cable squarely at the centerline of the bushing.
2. Remove 9-5/8" (240mm) of the outer jacket.
3. Unwrap the ground wires, DO NOT CUT OFF, bind and fold them back out of the way. Wrap a piece of vinyl tape around the cable covering the wire ends.
4. If using a 200ECS-G1 sealing kit, slide the cold shrink tube onto the cable beginning at the loose end.
5. Step 2 to complete the installation.

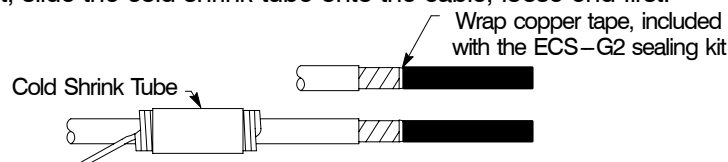


### D. JACKETED COPPER TAPE SHIELD CABLE

1. Cut the cable squarely at the centerline of the bushing.
2. Remove 9-5/8" (240mm) of the outer jacket.
3. Remove 7-1/8" (180mm) of the copper tape shield.



4. Wrap conductive copper tape, included with the 200ECS-G2 kit, over the end of the copper shield to hold it in place.
5. If using a 200ECS-G2 kit, slide the cold shrink tube onto the cable, loose end first.



6. Step 2 to complete the installation.

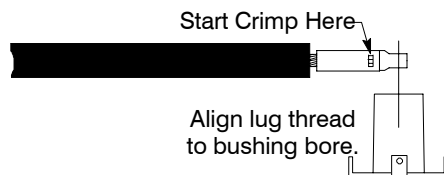
## STEP 2 CABLE PREPARATION

(Use cable cut back template for reference.)

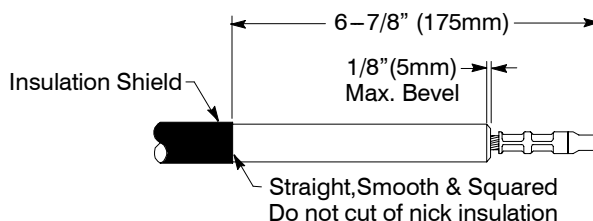
- A. Remove the shield and insulation 2-1/8" (55mm) from the cable end. Cut squarely taking care not to nick conductor.



- B. Wire brush bare aluminum conductors and immediately place compression lug over bushing. Rotate to spread inhibitor. Position compression lug so the CONTACT THREADED HOLE ALIGNS WITH THE BUSHING BORE. (Refer to crimp chart packaged with compression lug for recommended crimp tool information.) Start crimp at the crimp line mark. Rotate 180° each successive crimp. Carefully wipe excess inhibitor from the outside of the lug and cable.

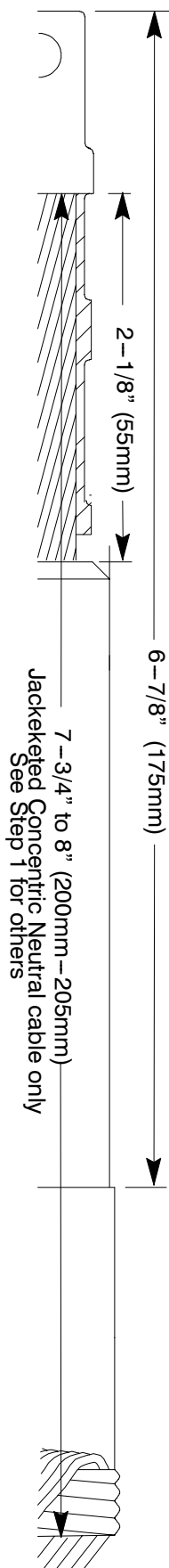


- C. Remove insulation shield as shown. Bevel insulation end 1/8" (5mm) max.



- D. Thoroughly clean insulation to remove all traces of dirt or excess inhibitor.

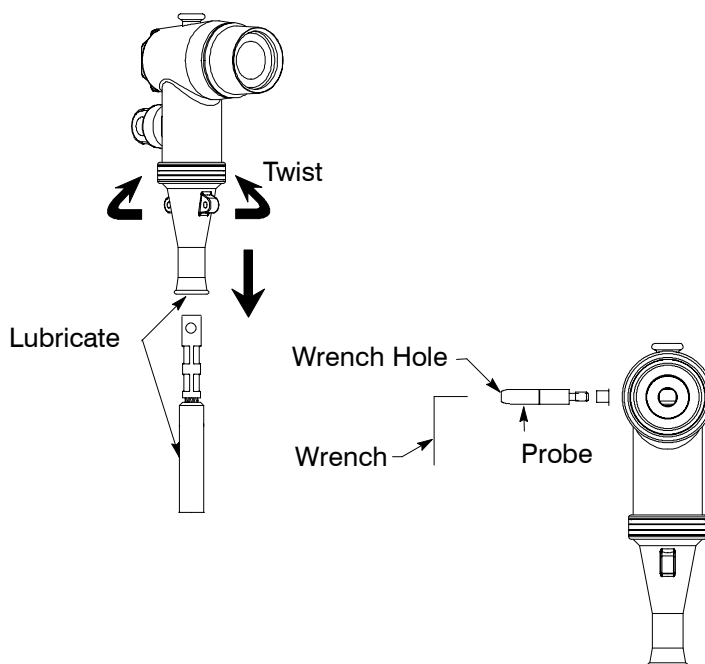
CABLE CUT BACK TEMPLATE



7-3/4" to 8" (200mm - 205mm)  
Jacketed Concentric Neutral cable only  
See Step 1 for others

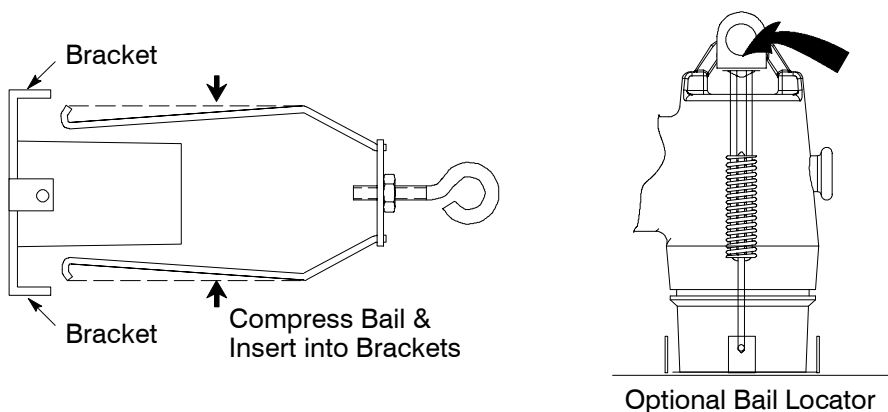
### STEP 3 ELBOW ASSEMBLY

- Clean the cable insulation and inside the elbow housing and lubricate with the lubricant supplied. **DO NOT SUBSTITUTE.** Other lubricants may be harmful to this product or its mating product(s). Keep insulation clean of dirt and grime.
- Slide the elbow connector onto the cable with a back and forth twisting motion. Wipe off all excess lubricant.
- Align elbow with compression lug's threaded hole.
- Thread probe into lug by hand, taking care not to cross-thread. Tighten with wrench until wrench bends.



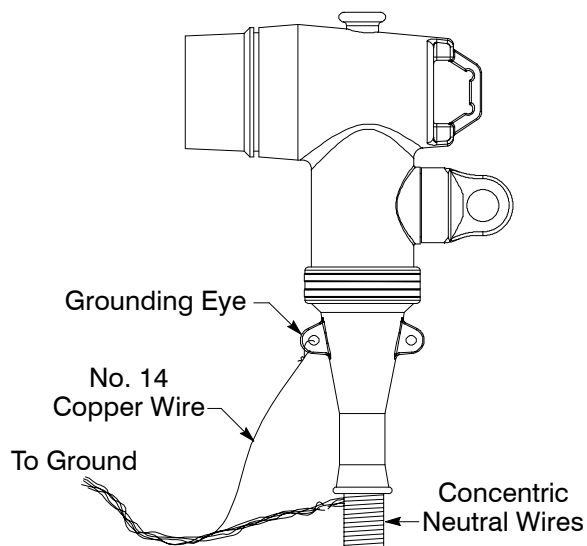
### STEP 4 ASSEMBLE BAIL

Place hold-down bail in hold-down bracket.



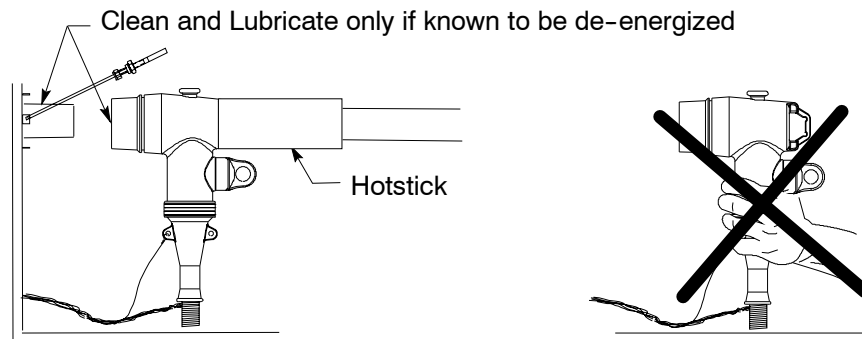
### STEP 5 CONCENTRIC NEUTRAL CONNECTION

- Using a separate copper wire (No. 14 AWG / 2.5mm) or equivalent, insert one end through the grounding eye on the elbow. Twist tightly taking care not to damage the eye.
- Twist all neutral wires and connect to ground using appropriate connector. Provide adequate slack in wires for elbow operation.



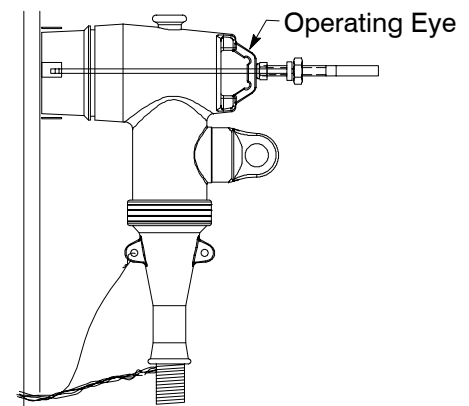
## STEP 6 CONNECT ELBOW AND BUSHING PLUG

- A. Clean the receptacle portion of the elbow connector and the mating bushing and lubricate with the lubricant supplied. LUBRICATE ONLY IF THE TRANSFORMER AND ELBOW ARE KNOWN TO BE DE-ENERGIZED.
- B. Use a fully insulated hot stick to place the elbow on the bushing. **DO NOT OPERATE BY HAND. DO NOT SEPARATE IF ENERGIZED.**



## STEP 7 BAIL ELBOW

- A. Pull hold-down bail up over the crown or top of elbow so that the eyebolt on the bail is directly over the operating eye.
- B. Tighten down on elbow locator by turning eyebolt in a clockwise direction. Adjust the nut on the eyebolt until it allows the eyebolt to seat securely in the locator. The nut should act as a stop to prevent the eye bolt from applying excessive force on the elbow. Once the nut is in final position, it will not have to be readjusted when removing and replacing elbow.



## VOLTAGE TEST

ELASTIMOLD connectors equipped with an integral capacitance test point can be used to establish whether or not the circuit is energized. When using the test point, complete the following steps:

- 1. Remove test point cap with a hotstick. When removing cap, **PEEL OFF AT AN ANGLE** rather than pulling directly in line with the test point assembly.
- 2. **WARNING:** THE VOLTAGE TEST POINT IS A CAPACITANCE DEVICE, IT IS NOT DIRECTLY CONNECTED TO THE CONDUCTOR. Do not use conventional voltage measuring equipment. Follow the manufacturer's directions for the meter that is used. Test with a suitable sensing device, made for use with separable connectors manufactured with capacitive test points, to determine if cable is energized. Contamination, moisture, dirt, etc. around the test point or use of the wrong measuring equipment can provide a false "no voltage" indication on an energized elbow. To prevent serious or fatal injury treat the elbow as energized until the "no voltage" test point indication is confirmed by other means.
- 3. After voltage detection has been made, clean the inside surface of the cap and lubricate with silicone lubricant; replace it on the test point.

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