

INSTALLATION INSTRUCTIONS

Elastimold

655VS / K655VS Deadbreak Vault Stretcher

CONTENTS: Vault Stretcher, 2-Cable Adapters, 2-Compression Lugs, 2-Insulating Plugs, Lubricant, Stud Prepack, Installation Instructions, Crimp chart.

The 655VS and K655VS connectors are designed to: 1) provide fully shielded, fully submersible deadfront cable connections to high voltage apparatus and 2) provide a means to splice and tap 600-ampere systems. The 655VS and K655VS are rated on 15kV and 25kV class systems respectively.

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.

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.

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

Limited Warranty:

1. ABB Installation Products Inc. 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, ABB Installation Products Inc. will, at its option, repair, replace or refund the defective product.
2. In no event shall ABB Installation Products Inc. be liable for any consequential, indirect, incidental or special damages, whether under contract, warranty, tort, negligence, strict liability or otherwise. ABB Installation Products Inc. will not be liable for providing temporary power, removal, working access, installation, transportation to or from any repair facility, or reimbursement for labor costs, or for any other expenses arising out of the removal or reinstallation of its products. Liability for breach of warranty is limited to the cost of repair, replacement or refund of the warranted product only.
3. Misuse, misapplication or modification of ABB Installation Products Inc. products immediately voids all warranties.

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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.

IS-0356

IS-655VS

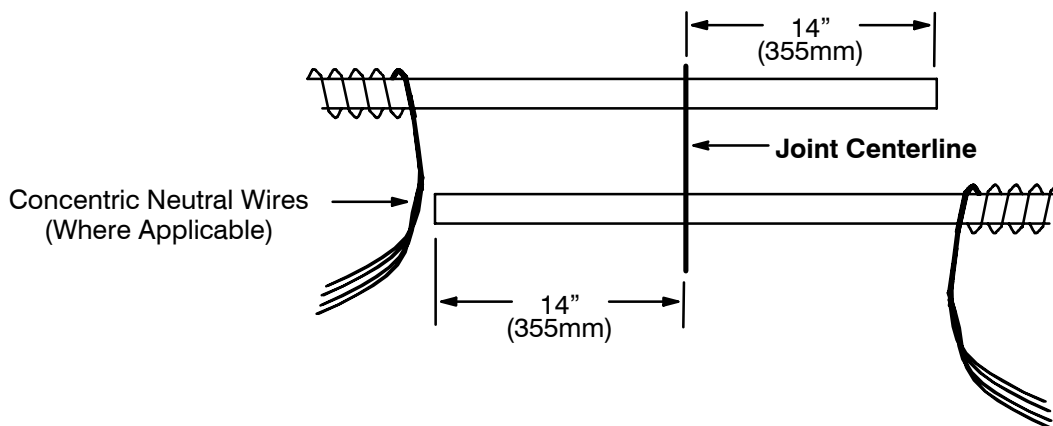
Revision: B

Date: June 1, 2021

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STEP 1

For concentric neutral cable, overlap both cables and cut to 14" (355mm) from center line of joint and bend back the concentric neutral wires.



STEP 2

Clean the outer surface of the cable a distance of 24" (610mm) or up to the bent back neutrals.

STEP 3 CABLE PREPARATION

Follow the STEPS A, B or C applicable to the cable being prepared.

A. 20MA or 21MA GROUNDING DEVICE OR 600ECS JACKET CABLE SEAL

Refer to the Installation Instructions supplied with those products for removal of cable outer jacket, shield connection and grounding.

B. UNISHIELD* AND LEAD SHEATH CABLE

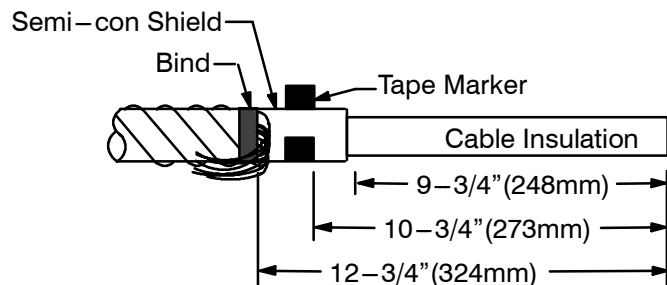
Refer to the Installation Instructions supplied with the 10TL cable shield adapter for cable preparation.

**Unishield is a trademark of General Cable Technologies Corporation.*

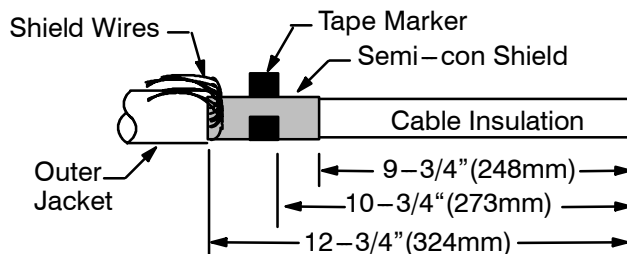
C. JACKETED AND NON-JACKETED CABLE

Remove the outer jacket (where applicable) and prepare cable as shown.

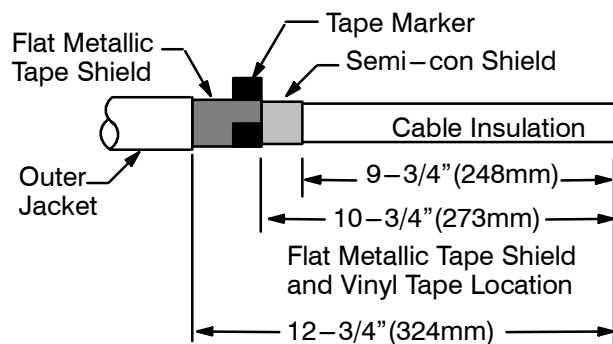
1. NON-JACKETED CONCENTRIC NEUTRAL WIRES



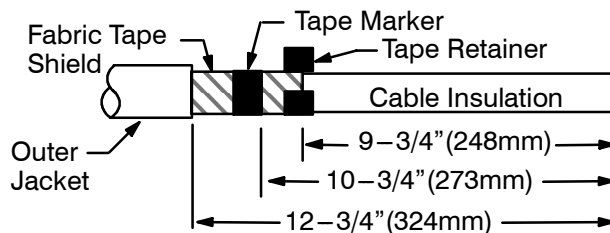
2. JACKETED SHIELD WIRES



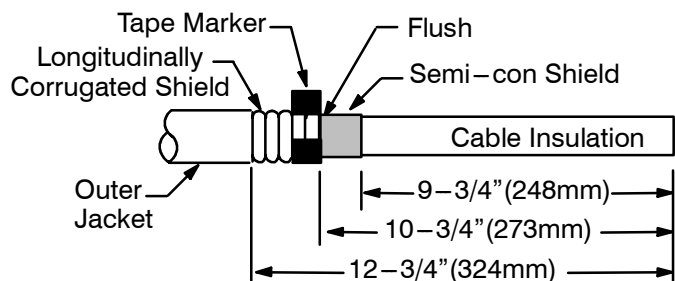
3. JACKETED FLAT METALLIC TAPE SHIELD



4. JACKETED FABRIC TAPE SHIELD

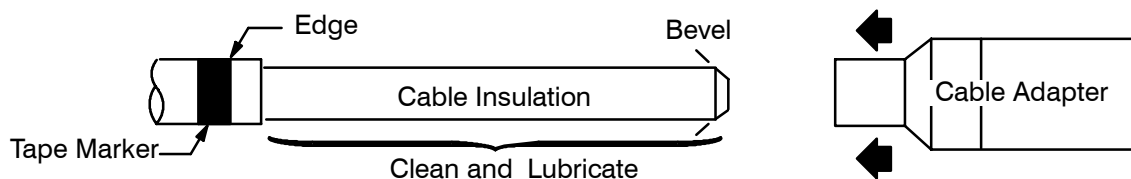


5. JACKETED LONGITUDINALLY CORRUGATED SHIELD



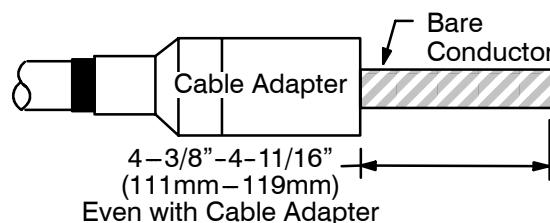
STEP 4 CABLE ADAPTER

Bevel the end of the cable insulation at a 45° angle, approximately 1/4" (6mm) back. Thoroughly clean, then lubricate cable insulation always working toward semi-con shield. Install cable adapter, small end first, until it is flush with the edge of the tape marker.



STEP 5 CONDUCTOR

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 between 4-3/8" - 4-11/16" (111mm - 119mm). Otherwise redo assembly.

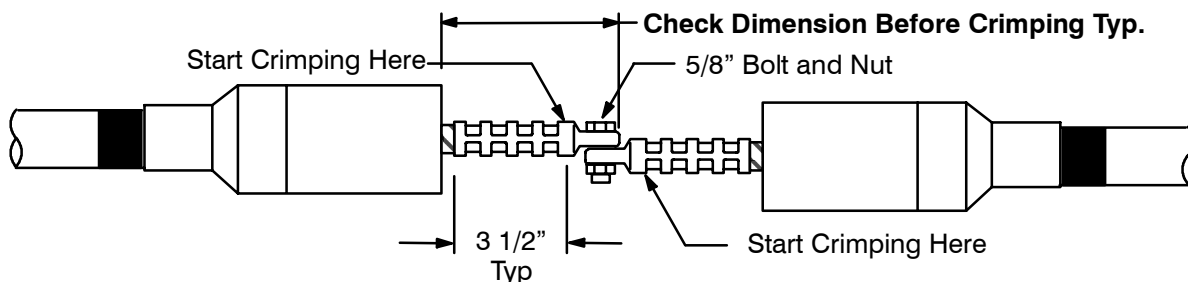


STEP 6

Copper Conductor: Fully insert conductor into compression Lug.

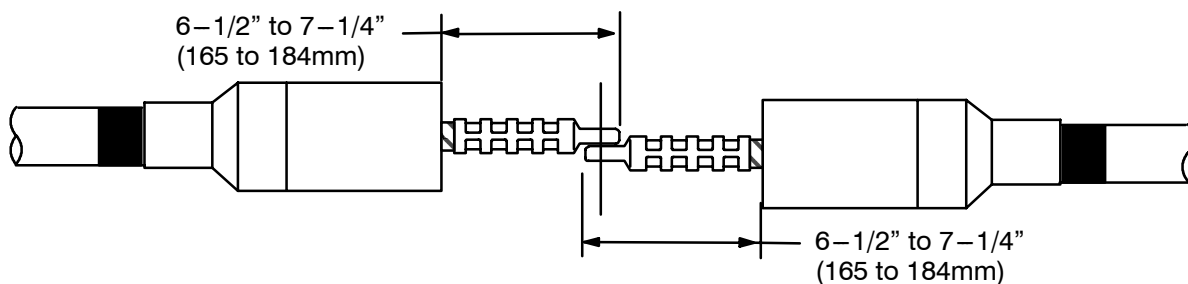
Aluminum Conductor: Wire brush conductor and immediately fully insert conductor into compression lug.

Measure the "Check Dimension" before crimping. Dimension should be less than 6-1/2". Otherwise redo assembly. Before making the first crimp, align the flat portions of the compression connector by using a 5/8" bolt and nut as a temporary locator while crimping. Hold the compression connector in the proper position and make the first crimp connection 3-1/2" from the open end of the compression fitting at the mark indicated on the connector.



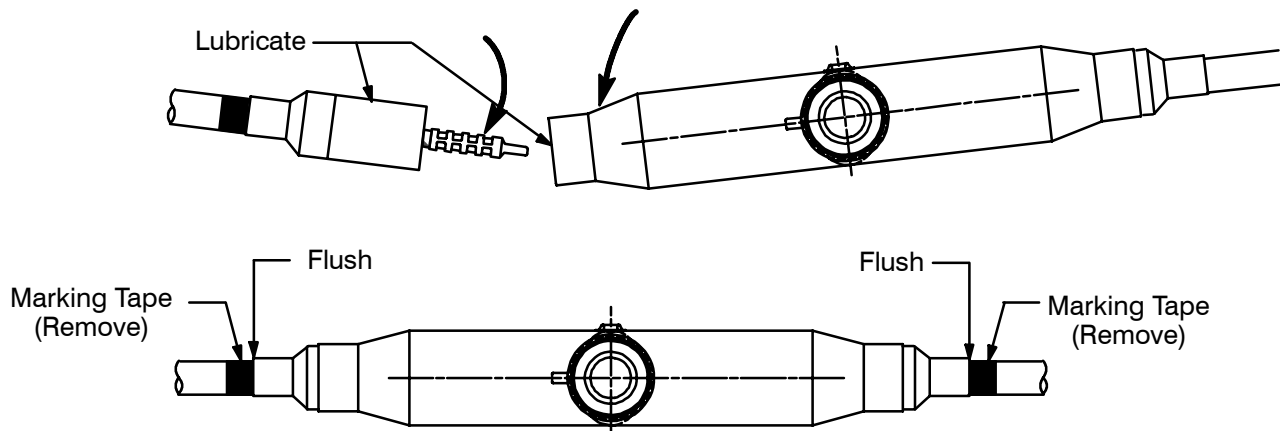
STEP 7

Rotate each successive crimp 180° to prevent bowing. Carefully wipe excess inhibitor from the outside of the connector and from the cable insulation. Check to ensure that the connector end is 6-1/2" to 7-1/4". Remove sharp flash, if any, from the crimp before inserting into the vault stretcher body.



STEP 8

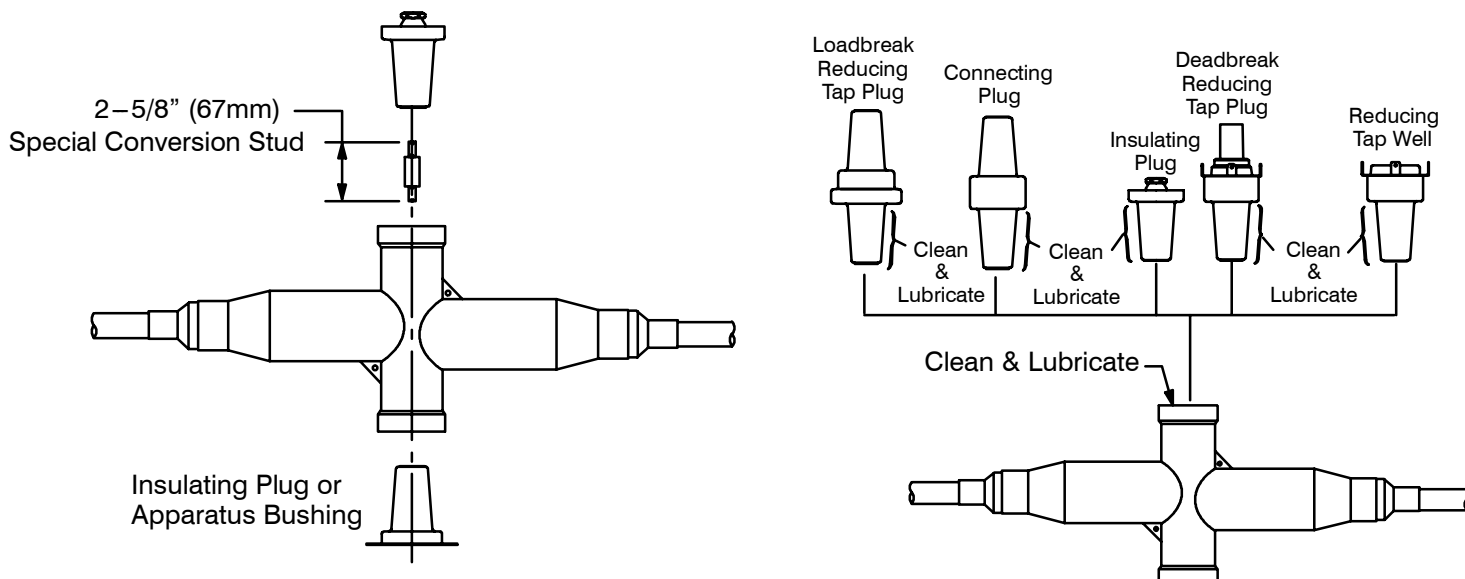
1. Lubricate the inside of the vault stretcher body and the outside of the cable adapter. Using a rotating motion, slip the body onto the cable adapter. Make sure the compression lug is aligned to seat with the inside mating portion of the vault stretcher. The compression lug should be pushed into the vault stretcher until it cannot advance further. The base of the adapter should still be aligned with the marking tape.
2. To insert the opposite cable into the other side of the vault stretcher, the vault stretcher and compression lug must be pushed sideways until the compression lug enters the open end of the vault stretcher body.
3. Slowly push both units toward their final alignment, making sure the lubricated adapter is sliding into proper position in the vault stretcher. Check the location of the compression lug through the viewing hole of the vault stretcher. When compression lug is fully seated, make sure that both cable adapters are still flush with tape markers. If not, reposition cable adapters. Remove tape markers.



STEP 9

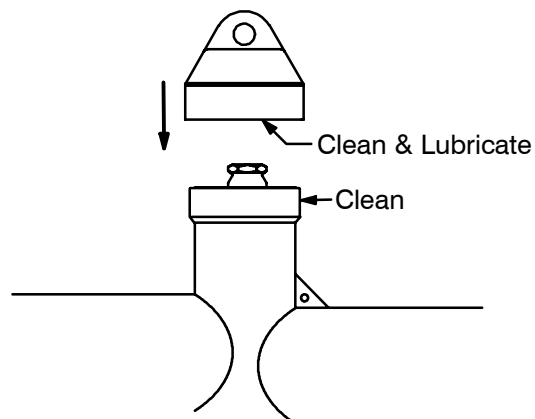
NOTE: A special stud (650VSA) 1/2" longer than the standard stud must be used with the vault stretcher.

1. DO NOT connect or disconnect mating products while energized. DO NOT energize while disconnected. Remove protective caps from the vault stretcher and the mating part. Hand tighten stud, supplied with vault stretcher, into one mating part. Clean and lubricate the vault stretcher and the mating part with lubricant supplied. (Keep surfaces of vault stretcher and mating part clean).
2. Clean and lubricate the mating part for the opposite end of the vault stretcher. Insert the mating part into the elbow. Engage the threads and hand tighten. Torque mating part according to the instructions supplied with the mating part. All mating parts must be operated in accordance with their operating instructions.



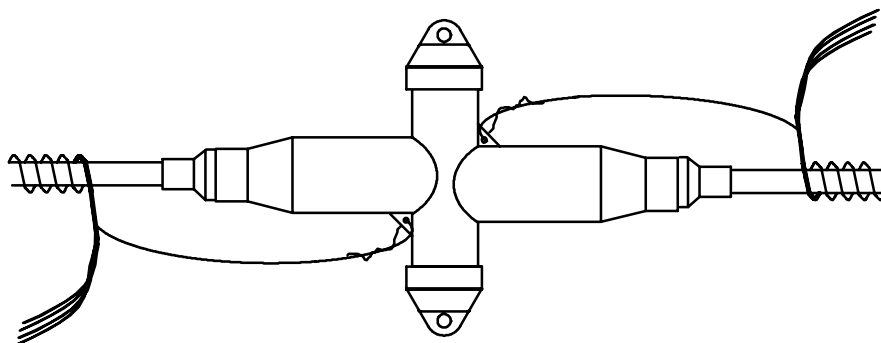
STEP 10

If an insulating plug is used as a mating part, clean and lubricate inner surface of the voltage detection cap and place on elbow. Push down hard until cap snaps into place.



STEP 11 GROUNDING CONCENTRIC NEUTRAL CABLE

Insert one end of a piece of wire with ampacity at least equivalent to No. 14 AWG copper through grounding eye and twist to make a small loop. Repeat for other grounding eye. DO NOT damage the eyes. Connect wires to ground using suitable connectors.



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