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Shrink Polymer Systems

Cable Installation Materials – 24 volts to 36 kV

Installation Instruction

Heat Shrink Termination For Single Core 12kV Triplex Cable

* PLEASE READ INSTRUCTIONS THOROUGHLY BEFORE PROCEEDING *

INDOOR



OUTDOOR



ISSUE DATE: 27.10.09



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General Fitting Instructions

- It is highly recommended that a tool suitable for the removal of the semi-conductive screen is used to provide a reliable discharge free termination screen point
- Use a propane gas torch with a soft flame
- Avoid a pencil like blue flame which is caused by unregulated supply
- Keep the flame on the move to ensure even shrinkage of all the materials and also helps to reduce scorching
- Ensure that all components are kept clean and grease free during installation
- Allow to cool before applying any mechanical strain

Remove Outer Cable Sheath:

VOLTAGE	INDOOR L	OUTDOOR L	X
12kV	190mm	270mm	LENGTH OF LUG BARREL + 10%

Table 1

Glanding

Gland kits are available for Triplex Cables, see kit reference SPS 1095 and SPS 1197

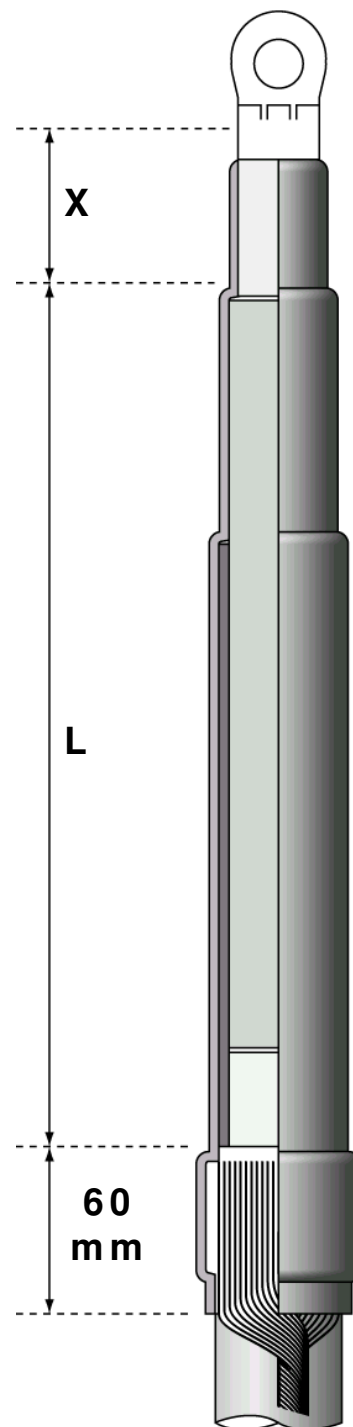


Fig1

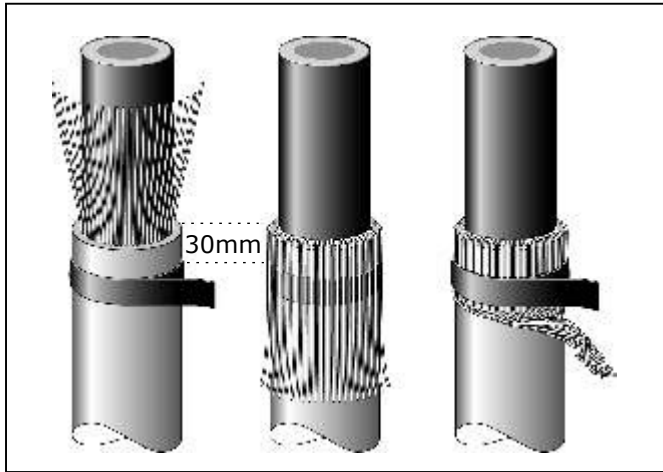


Fig 2

1. Installation

Remove the Outer Cable Sheath to the dimensions $L + X$ given in Table 1.

Remove any fillers before cleaning and de-greasing the Cable Sheath below.

2. Screen Treatment

Copper Wire Screen

Apply one turn of the Red Mastic Sealant Tape at a point 30mm below the sheath cut (Fig 2).

Bend back the Copper Wires and press them into the Tape. Apply one more turn of Red Mastic Tape over this point. The Wires should be twisted together and Bonded to a suitable earth point.

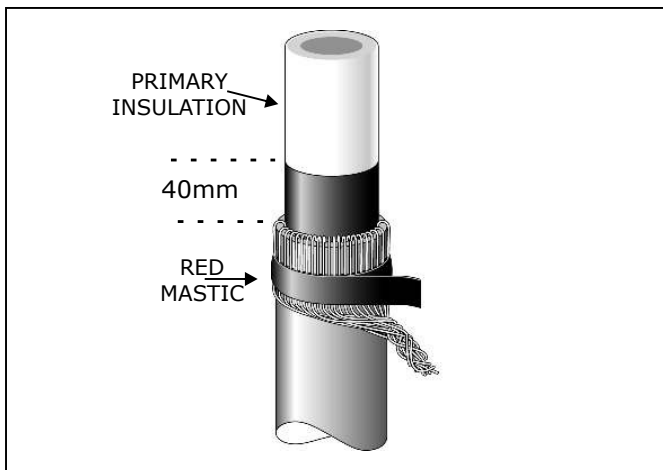


Fig 3

3. Conductive Layer Treatment

Extruded Conductive Layer

Remove the Conductive layer using a suitable Tool to the dimensions shown in Fig 3. Avoid scoring and damage to the Primary Insulation.

Note:- The Screen should be removed leaving a cleanly cut end. Do not roughen the Insulation with Emery Cloth.

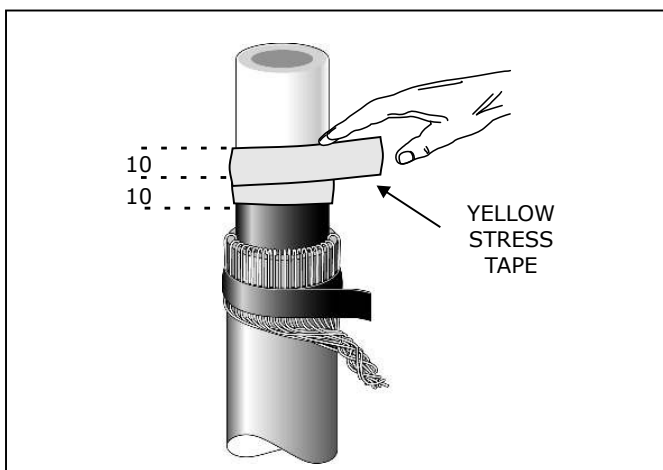


Fig 4

4. Apply Stress Relief Tape

Remove the release paper, stretch and wrap the Yellow Stress Tape (TS31785Y) around the end of each Core Screen by approx 10mm onto the Primary Insulation and the Semi Conductive layer.

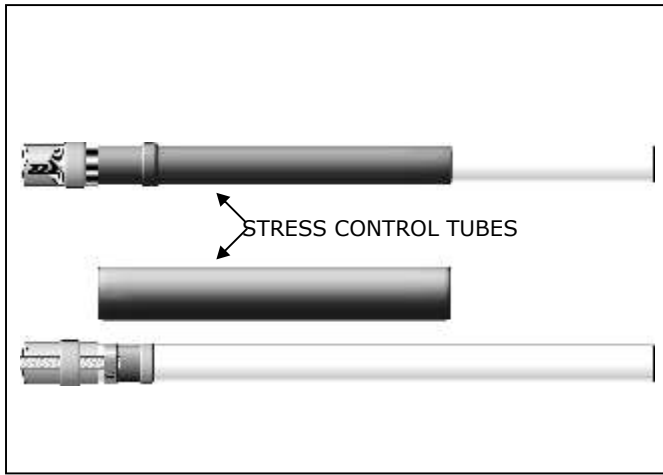


Fig 5

5. Stress Control Tubes

Position the Stress Control Tubes so that they cover the Earth connection point and the Conductive Screen end. However do not extend past this point onto the Outer Cable Sheath.

Shrink the Tubes one at a time starting from the bottom. Ensure the tubes are wrinkle free and have an even wall thickness.

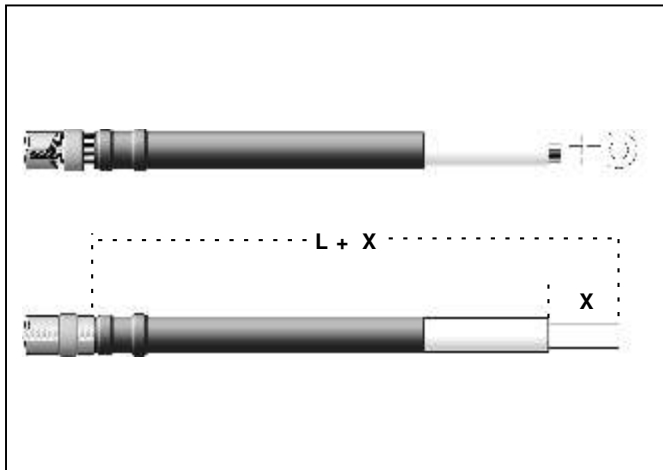


Fig 6

6. Installing Cable Lugs

The Cable should be cut to dimension $L+X$ as given in Table 1. Remove the Insulation at X and install the Lug using the appropriate method.

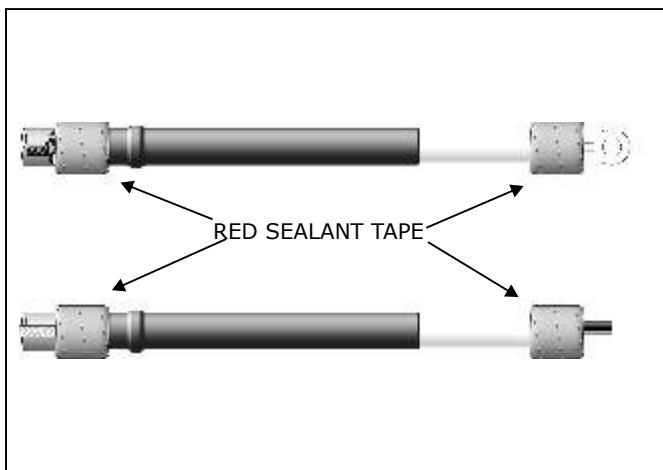


Fig 7

Preheat each Lug and wrap two layers of Red Sealant Tape over the Lug barrel and extend onto the Insulation by approx 10mm. Ensure the Tape is applied as shown.

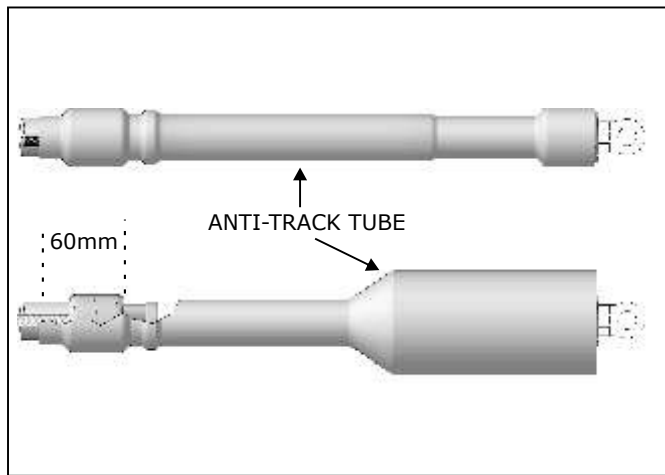


Fig 8

7. Installing Anti-Track Tube

Position the Anti-Track Tubes so that they overlap the Earth connection point and outer Cable Sheath by 60mm as shown in Fig 8.

Shrink the Tubes starting from the bottom towards the top. Keep the flame on the move to ensure an even wall thickness. User may trim the Tubes at the Lug end with a sharp knife if necessary.

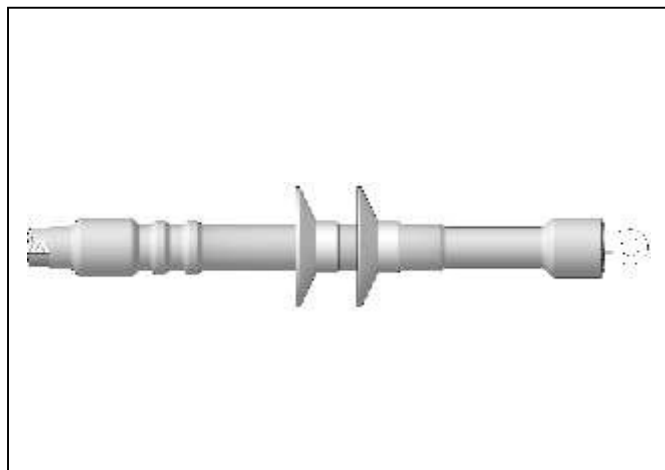


Fig 9

8. Indoor Terminations

Anti-Track Rain Sheds are not required on Indoor Terminations.

Clearance Dimensions

Minimum clearances should be observed for phase to phase and phase to ground from top of Stress Tubes:-

Phase to Phase = 20mm

Phase to Ground = 20mm

Top of Stress Control Tube to bottom of Lug Barrel = 50mm

9. Outdoor Terminations

Anti-Track Sheds should be fitted starting from the bottom up as per the dimensions given in Fig 10.

Two Sheds per phase are fitted, see Fig 9.

Positioning of Sheds

The first Shed should be fitted at a distance of 200mm from the lower edge of the Anti-Track Tube to the edge of the Shed. All subsequent Sheds should be fitted at a distance of 80mm from edge to edge.

Note:- It is advisable not to position Sheds at the top of the Stress Control Tubes. Re-position if necessary.

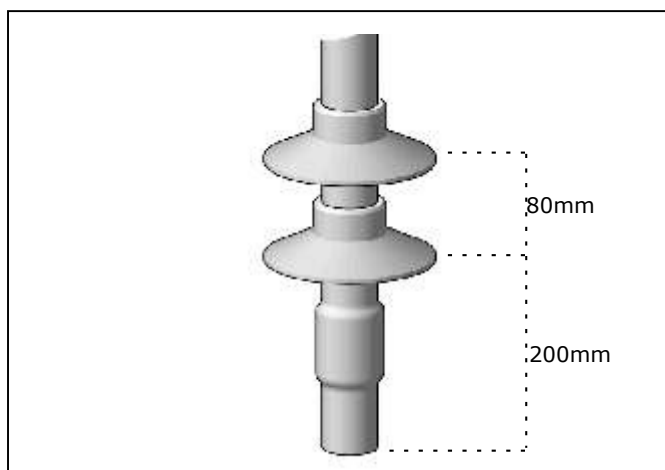


Fig 10

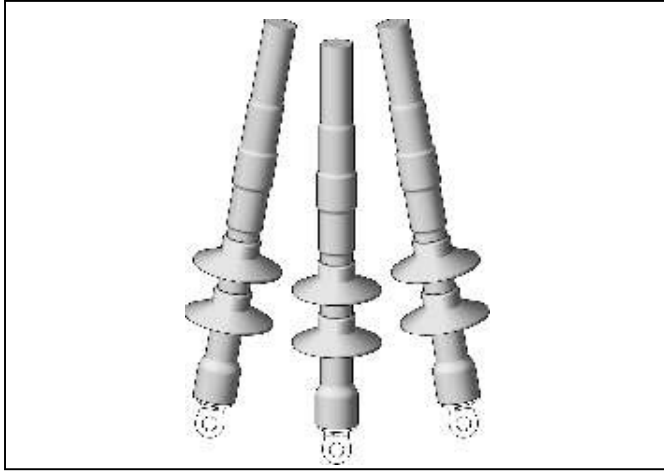


Fig 11

Reverse Connection

If a Termination is to be mounted for connection above the equipment i.e in the reverse position, Sheds should be installed through 180°.

Min Bending Radius $r=15 \times D$



Fig 12

10. Cable Bending Radius

If required The Cable can be heated to approximately 70°C to enable a bend to be introduced. See Fig 12 showing the bending radius.



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