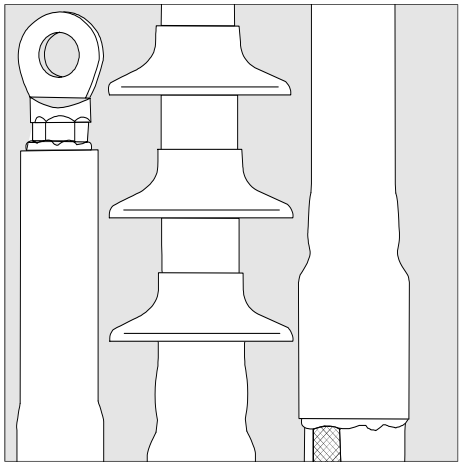
Energy Division

Tyco Electronics



Installation Instruction EPP-1577-AU-5/09

Single Core Indoor and Outdoor Termination XLPE Insulated Cables - 11kV with Composite Sheath

25-95mm2

Type: IXSU-F / OXSU-F

ENDORSED BY	SIGNATURE	DATE
Wilfred Leung Principal Engineer—Mains RailCorp	W. Leung	22. 6. 2009

APPROVED BY	SIGNATURE	DATE
Neal Hook Chief Engineer - Electrical Systems RailCorp	NHook	30/6/2009

APPROVED BY	SIGNATURE	DATE
Andrew Thompson Product Manager Tyco Electronics	A. Thom	20/8/09

Before Starting

Check to ensure that the kit you are going to use fits the cable.

Refer to the kit label and the title of the installation instruction.

Components or working steps may have been improved since you last installed this product.

Carefully read and follow the steps in the installation instruction.

General Instructions

Use a propane (preferred) or butane gas torch.

Ensure the torch is always used in a well-ventilated environment.

Adjust the torch to obtain a soft blue flame with a yellow tip.

Pencil-like blue flames should be avoided.

Keep the torch aimed in the shrink direction to preheat the material.

Keep the flame moving continuously to avoid scorching the material.

Clean and degrease all parts that will come into contact with adhesive.

If a solvent is used follow the manufacturer's handling instructions.

Tubing should be cut smoothly with a sharp knife leaving no jagged edges.

Start shrinking the tubing at the position recommended in the instruction.

Ensure that the tubing is shrunk smoothly all around before continuing along the cable.

Tubing should be smooth and wrinkle free with inner components clearly defined.

Check List Number: CL893-5/09

OXSU-FRCP04

Qty: 1

Kit Contents

3	x	HVOT-38/12-340/242	Non Trk Tubing HV Red 340 Long Coated
6	x	205W320-103/89	Skirt (Shed) - Red - Adhesive
6	x	S1085-3-150	Low Temp Sealant-Red-150Lg - 50 Wide
3	x	S1085-1-100	Low Temp Sealant-Red-100Lg - 20 Wide
3	x	S1189-1-100	Void Filling Mastic 20 x 100mm Yellow
3	x	EPPA-004	Cleaning Tissue
1	x	EPPA-029-3-1000	Tie Wire 1000mm Long
1	x	EPP-1577-AU-4/09	Installation Instruction

Tyco Electronics
Energy Division
Dulmison Pty Ltd
ABN 56 000 129 573
Unit 2, No 3 Corella Close
Berkeley Vale NSW 2261

02 4389 6000 tel
02 4389 6061 fax
www.tycoelectronics.com

Date: 26/05/2009
ESD-1573-AU

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Cable Preparation

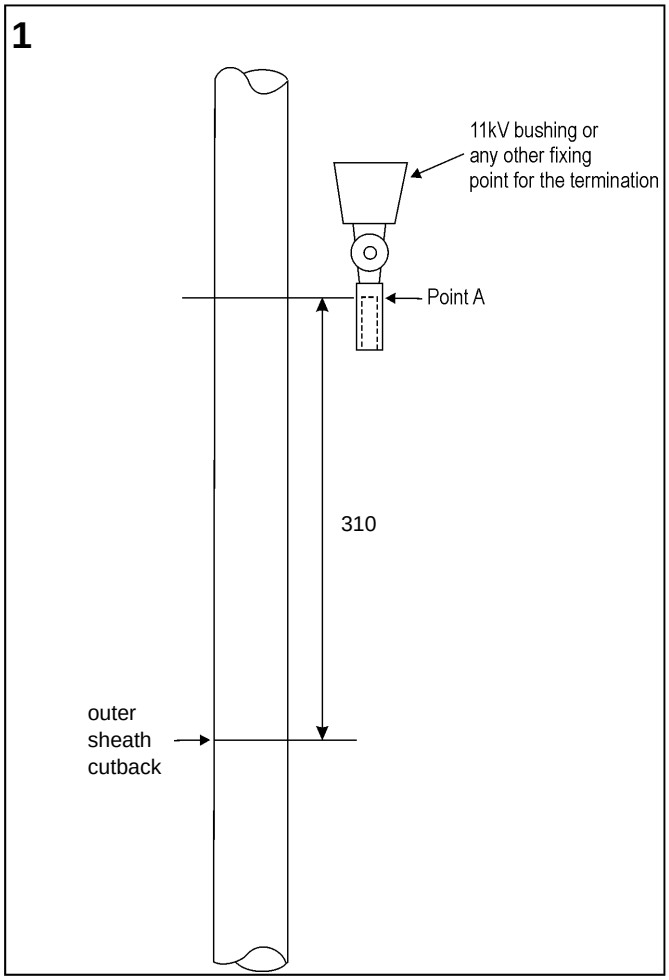
Mark the outer surface of the barrel of the lug to indicate the depth of the hole in the barrel (point 'A' in the sketch).

Bolt the lug into its final position to allow the cable stripping dimensions to be determined.

Set the cable into position and as close to the lug as possible.

NOTE: Allow enough cable length for the screen wires to reach the earthing point in one continuous length. Place a mark on the cable sheath level with point 'A'.

Place another mark on the cable sheath 310mm below point 'A'. This is the outer sheath cutback position.



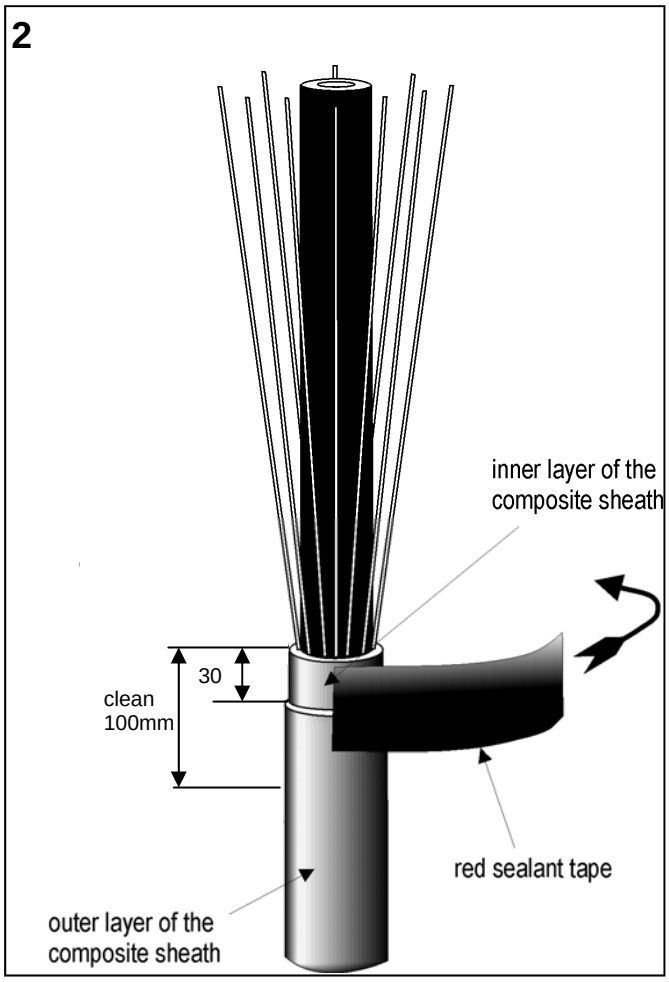
Remove the outer layer of the composite sheath for 310mm.

Mark a point 30mm above the outer sheath cutback. Remove the inner layer of the composite sheath down to this point.

Remove the water swellable tapes (if any) level with the inner layer of the composite sheath cut.

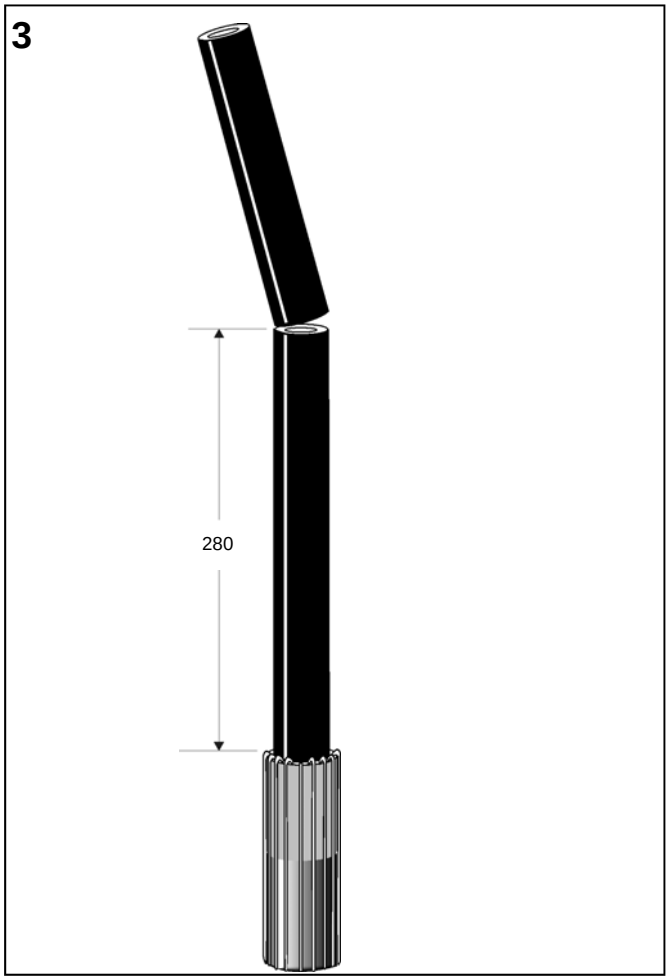
Clean and degrease the end of the composite sheath for 100mm using the cleaning tissue provided in the kit.

Wrap the 50mm wide red sealant tape around the cable at the outer sheath cutback. The mastic should be centralised at the outer sheath cutback, so as 25mm of mastic sits either side of this position (25mm on the outer sheath and 25mm on the inner sheath).



Bend the screen wires back onto the cable sheath. Avoid crossing the individual screen wires. Temporarily fix the screen wires to the cable sheath.

Cut the cable cores 280 mm from the inner sheath cutback.

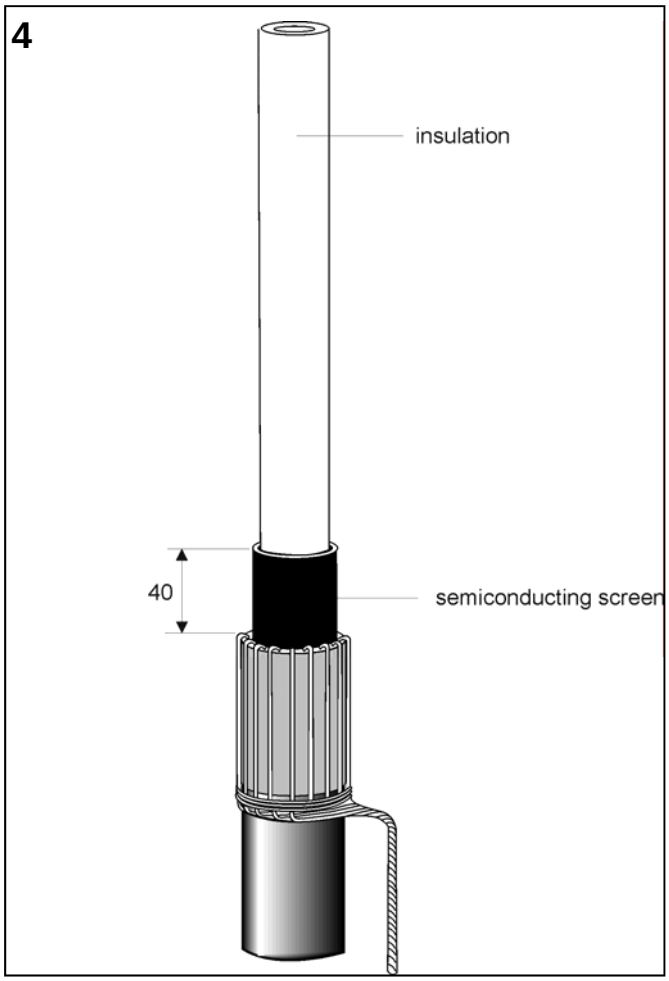


Thoroughly remove the insulation screen to 40mm above the inner sheath cutback.

NOTE: Do not nick the insulation.

The surface of the insulation should be smooth and free from all traces of conductive material.

If there are any irregularities or imperfections in the surface of the insulation, jointing work should stop and the defects reported to RailCorps' representative for corrective action.



Remove the insulation to dimension K (Depth of cable lug barrel hole + 5 mm).

Install sealed terminal lugs in accordance with manufacture's specification. If using compression lugs, remove any sharp edges and flashing as well as removing excess grease after installation.

Clean and degrease the core insulation and the barrel of the lug using the cleaning tissue provided in the kit. ***Do not allow the solvent to touch the insulation screen.***

NOTE: Do not use cable lugs with barrel holes deeper than a maximum of 110 mm.

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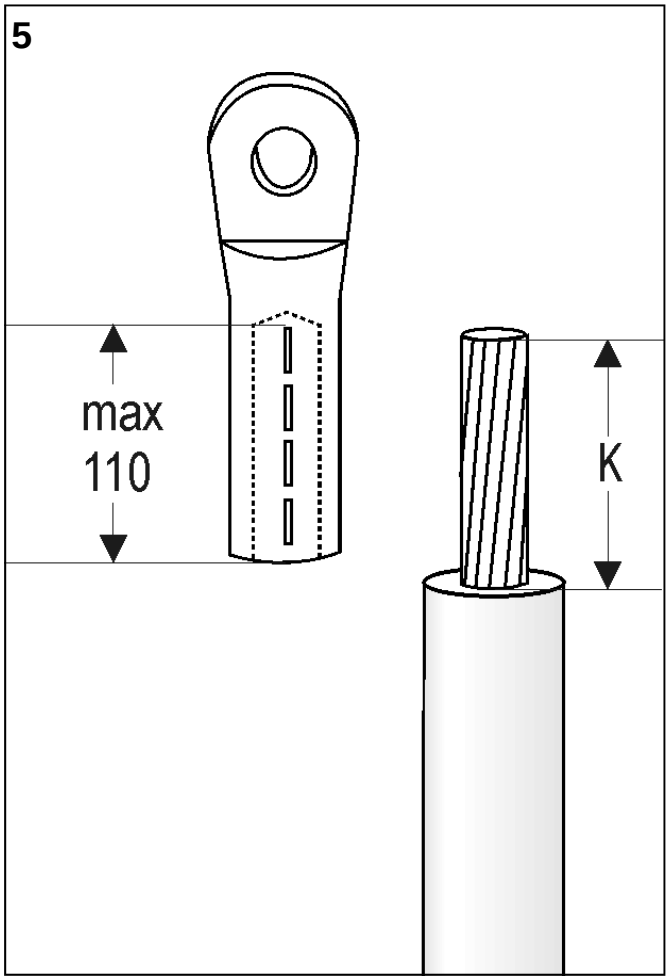

Remove the release paper from the yellow void filling strip. Wrap the void filler around the insulation screen starting 20 mm from the end of the insulation screen and continuing onto the insulation for 10 mm. Stretch the strip to half of its original width to achieve a thin edge around the insulation.

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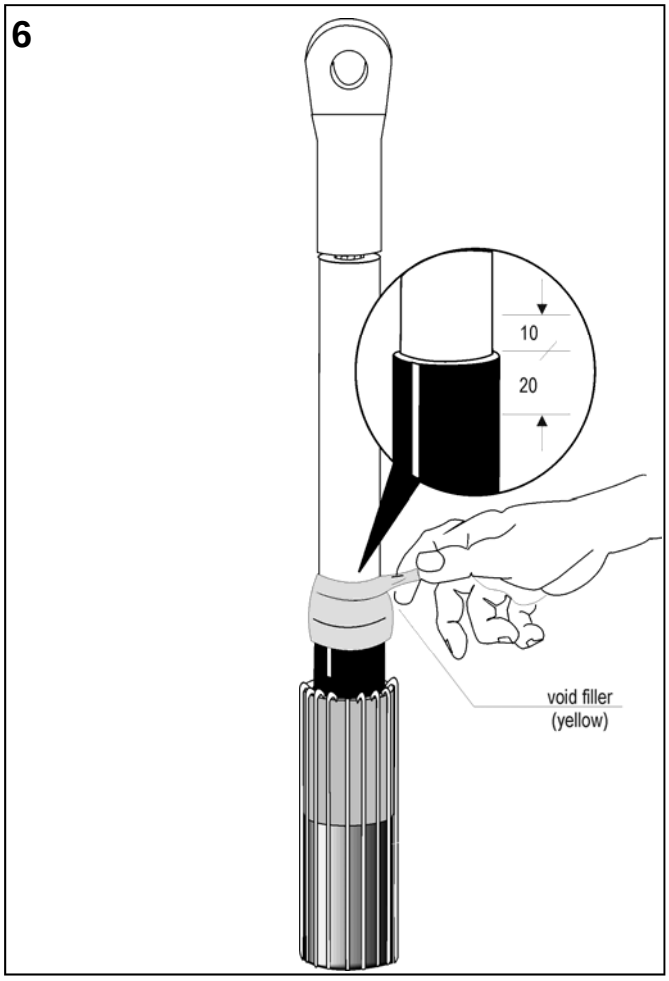

Apply one complete turn of 20mm wide red sealant tape around the barrel of the lug, at the palm end of the lug barrel, as depicted. Use the remaining sealant to fill in the space between the core insulation and the cable lug to leave a smooth transition.

Apply one layer of sealant tape over the screen wires for 60mm.

Preheat the cable lug slightly before placing the tubing over the core. The bottom end of the tubing should overlap the cable sheath by 60 mm.

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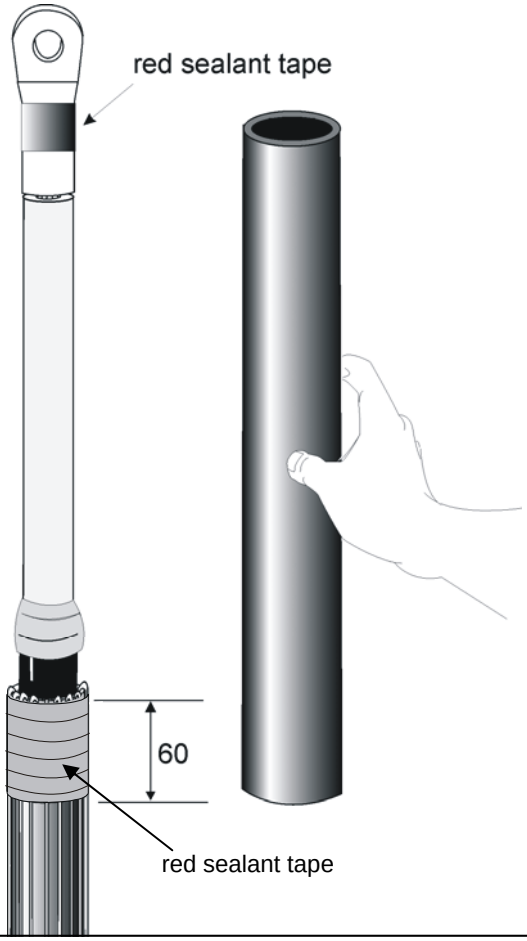

Shrink the tubing down starting at the insulation screen cut. Heat the area well but avoid scorching the surface. Continue shrinking towards the cable lug. Finally shrink down the bottom end of the tubing.

The numbers in the drawing indicate the shrink sequence.

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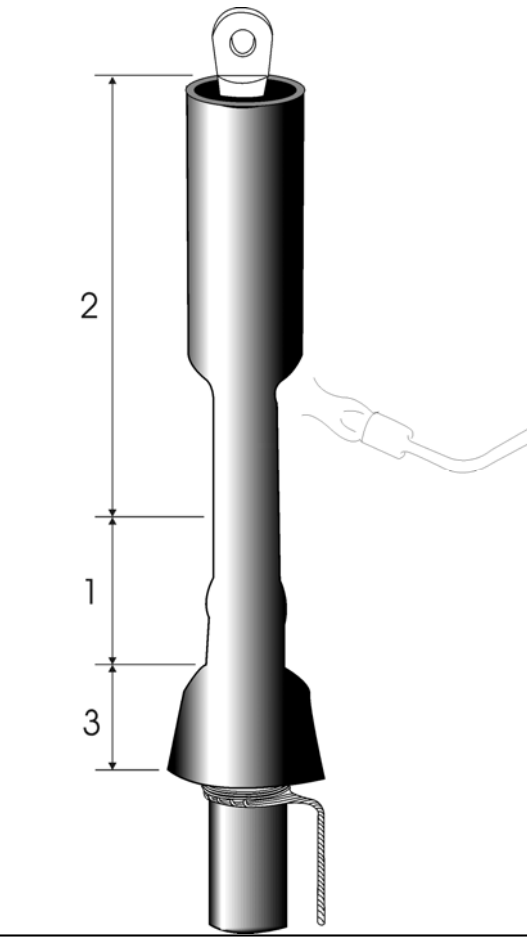
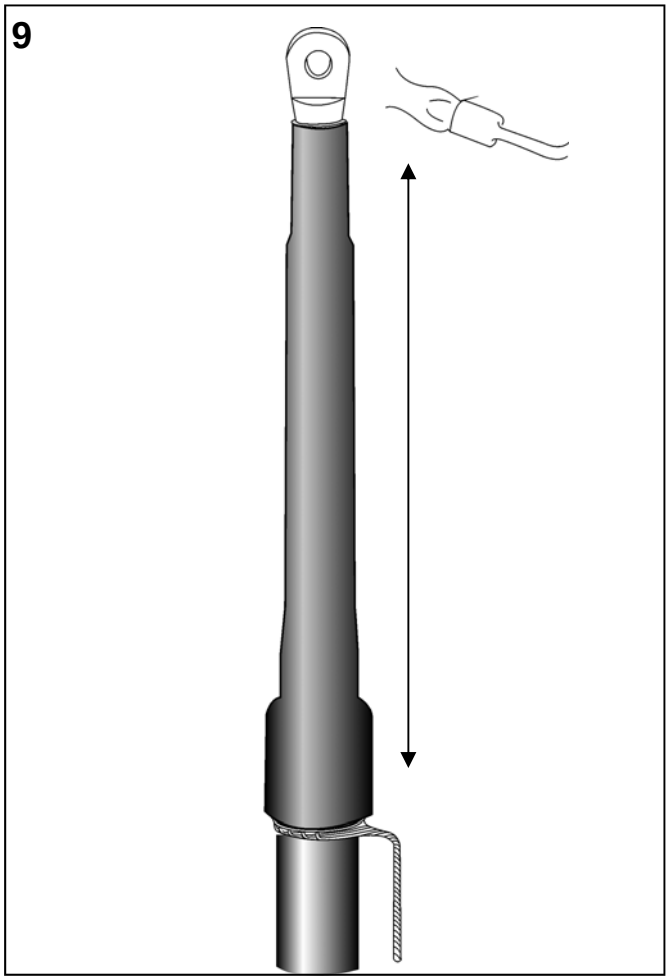


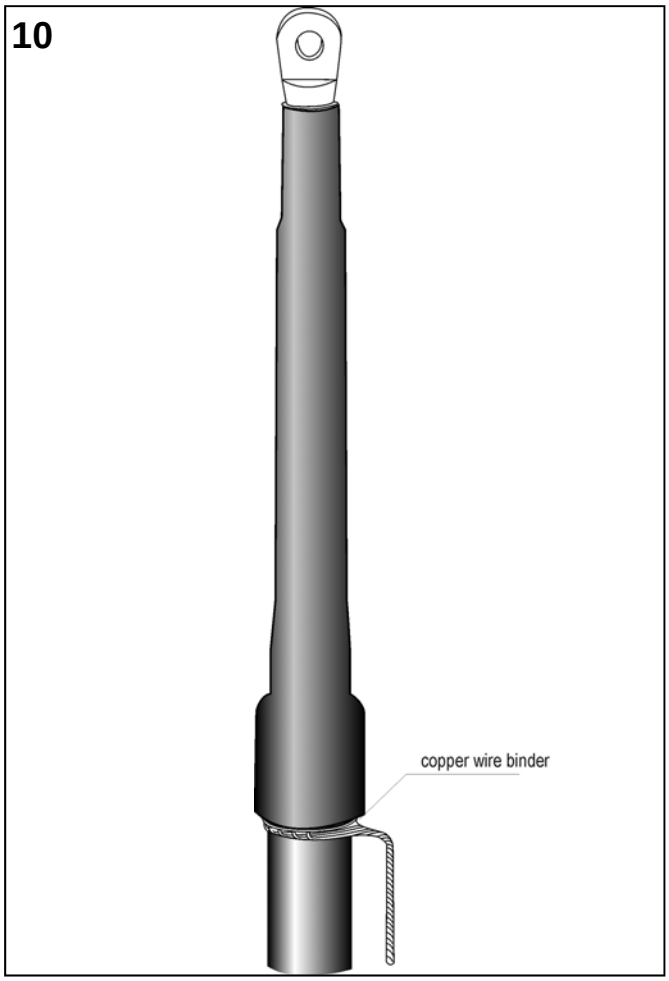
Apply additional heat to the tubing and the palm of the cable lug until a bead of sealant (green) appears around the top of the tubing.

Allow the termination to cool before applying any mechanical strain.



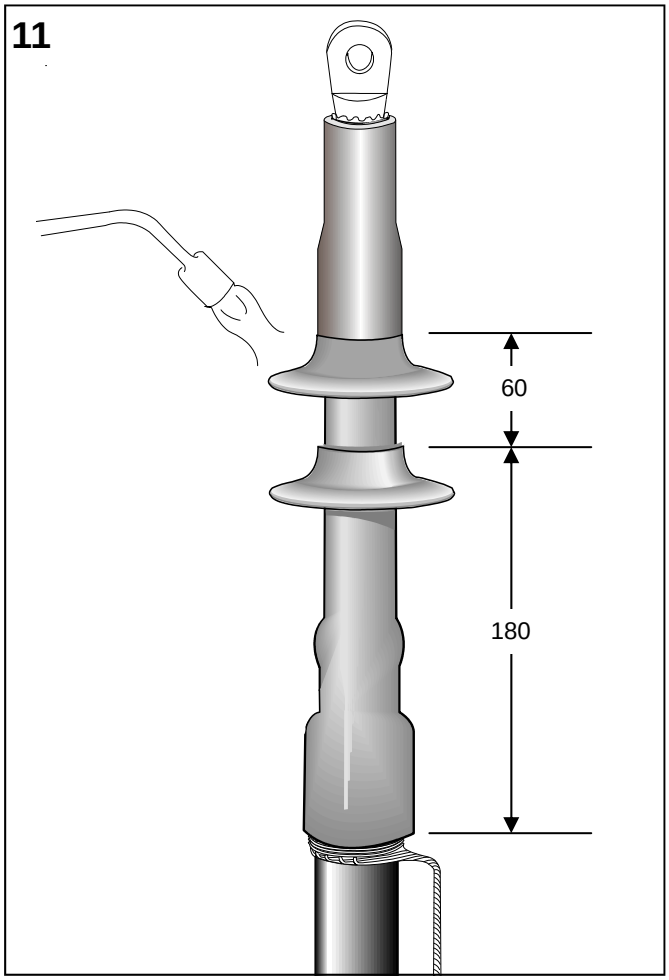
Gather the screen wires together on each core to form a separate earth lead.

This completes an indoor termination.

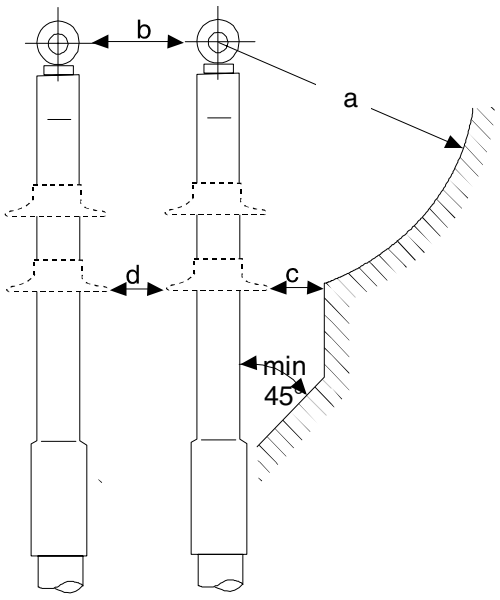


Completion of an Outdoor Termination

Shrink two rain sheds down into place at the position shown.



Minimum Clearances



Air clearances:

a phase to earth	160 mm (for 95kV impulse level)
b phase to phase	185 mm (for 95kV impulse level)
c phase to earth	15 mm
d between rain sheds	10 mrn

Please dispose of all waste according to environmental regulations.

Tyco Electronics Raychem GmbH
Energy Division
Finsinger Feld 1
85521 Ottobrunn/Germany
0049-89-6089-0 tel
0049-89-6089-345 fax
http://energy.tycoelectronics.com