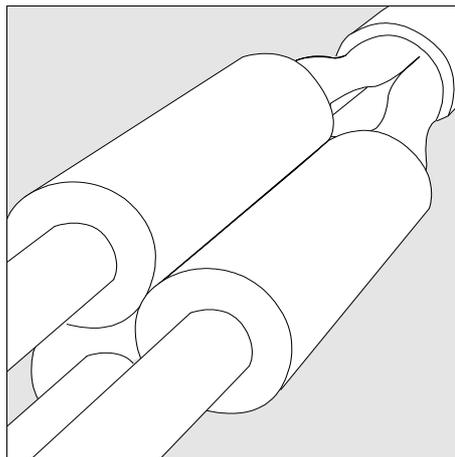


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**Installation Instruction  
EPP-0255-7/93**

**Joints for Screened  
3-Core Plastic and  
Rubber Insulated  
Cables 12 kV to 17.5 kV  
without Armour**

**Type: SXSU**

**Tyco Electronics Raychem GmbH u Hrvatskoj:  
ENCRON d.o.o.**  
Ulica grada Vukovara 39  
10 000 Zagreb  
Tel.: (01) 6115 277 i (01) 6115 278  
Fax.: (01) 6115 250

**Tyco Electronics Raychem GmbH  
Energy Division**  
Finsinger Feld 1  
85521 Ottobrunn  
Munich, Germany  
Tel. ++49-89-6089-0  
Fax ++49-89-6096345

## **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.**

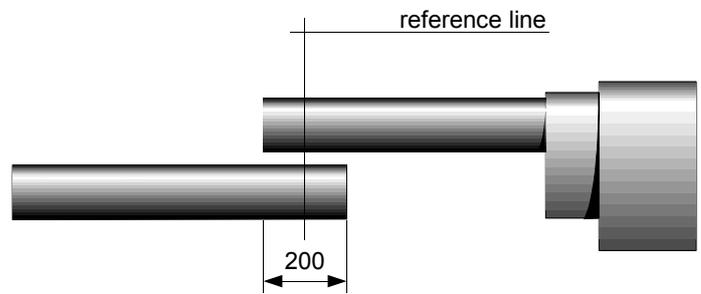
The Information contained in these installation instructions is for use only by installers trained to make electrical power installations and is intended to describe the correct method of installation for this product. However, Tyco Electronics has no control over the field conditions which influence product installation.

It is the user's responsibility to determine the suitability of the installation method in the user's field conditions. Tyco Electronics' only obligations are those in Tyco Electronics' standard Conditions of Sale for this product and in no case will Tyco Electronics be liable for any other incidental, indirect or consequential damages arising from the use or misuse of the products.

Raychem is a trade mark.

## Cable Preparation

Overlap the cables to be joined by about 200 mm.  
 Mark the reference line (the middle of the overlap).  
 Slide one outer sealing sleeve over one cable end.  
 Fold and tape it down temporarily.  
 Position the remaining sealing sleeve over the first one.

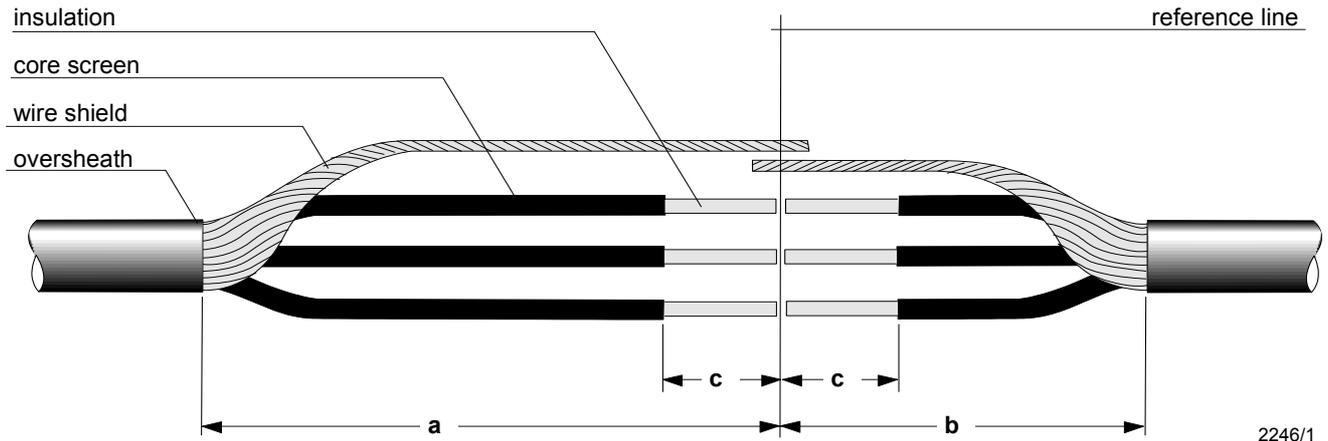


## Core Preparation

### A. Cable with wire shield

Remove the oversheath to the dimension **a** given in **Table 1**.  
 Gather the wires together to form an earth conductor, and fold them back onto the cable oversheath.  
 Shape and position the cores as shown in drawing below. Cut the cores at the reference line.  
 Thoroughly remove the core screen according to the dimension **c** given in **Table 1**, so that the insulation surface is free from all traces of conductive material.

**Note:** Do not nick the insulation.



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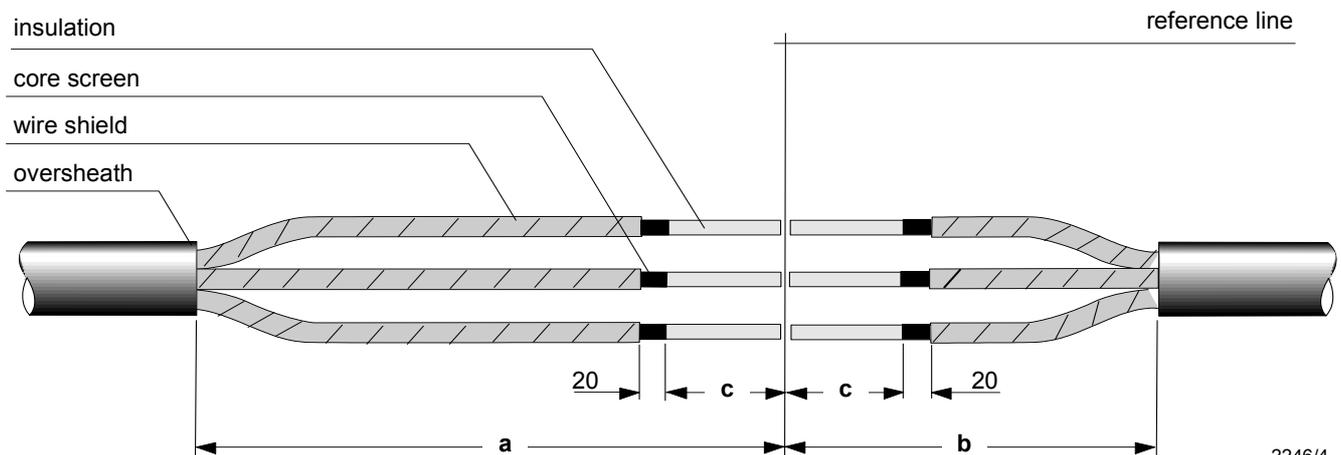
**Table 1**

Kit Size	Cross Section	Cross Section	a [mm]	b [mm]	c [mm]
	12 kV [mm <sup>2</sup> ]	17.5 kV [mm <sup>2</sup> ]			
A	25-35	25	600	400	115
B	50-70	35-50	600	450	120
C	95-185	70-185	700	500	145
D	240-300	240-300	750	550	155

### B. Cable with tape shield

Remove the oversheath to the dimension **a** given in **Table 1**.  
 Shape and position the cores as shown in drawing below. Cut the cores at the reference line.  
 Position a temporary wire binder on the metal tape shield according to dimension **c + 20 mm** as given in **Table 1**.  
 Unwind the metal tape shield up to this point and tear it off against the edge of the wire binder.  
 Thoroughly remove the core screen according to the dimension **c** given in **Table 1**, so that the insulation surface is free from all traces of conductive material.

**Note:** Do not nick the insulation.



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## Completion of Joint

Slide a combined tubing set over each long cable core.

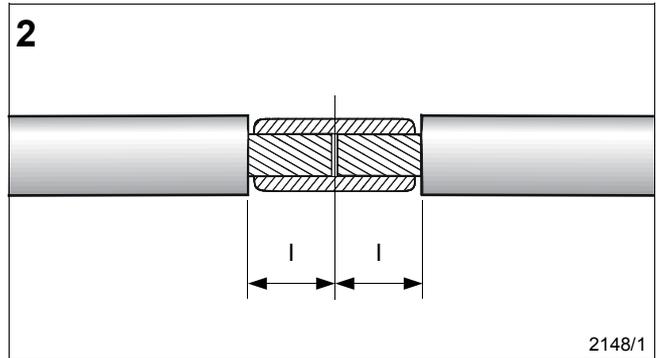
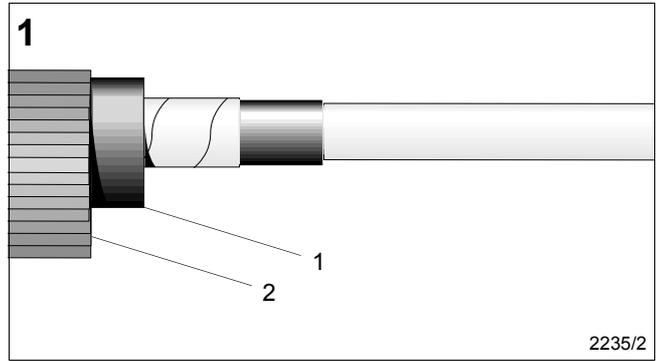
1. Stress control tubing (black)
2. Screened insulating sleeve (black and red)

Cut back the insulation to dimension  $l = \text{half connector length} + 5 \text{ mm}$ .

Joint the conductors by crimping, soldering or any other equivalent method.

Remove any sharp edges.

Clean and degrease the connector and the insulation.



**Table 2**

**Maximum dimensions of connectors before installation**

Kit Size	Cross Section	diameter	length
	12 kV [mm <sup>2</sup> ]	[mm]	[mm]
A	25-35	17	100
B	50-70	20	110
C	95-185	30	150
D	240-300	35	170

Kit Size	Cross Section	diameter	length
	17.5 kV [mm <sup>2</sup> ]	[mm]	[mm]
A	25	17	90
B	35-70	17	90
C	70-185	30	145
D	240-300	35	150

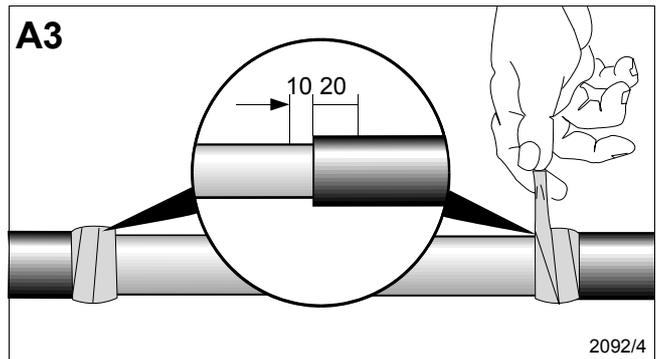
### A. Cables with wire shield

Remove the release paper from the short void filling strip (yellow) with the pointed end.

Wrap the strip around the end of the core screen.

Cover 20 mm of the core screen and continue onto the insulation for 10 mm.

Stretch the strip to half of its original width. Wrap it around the insulation leaving a thin overlap.



### B. Cables with metal tape shield

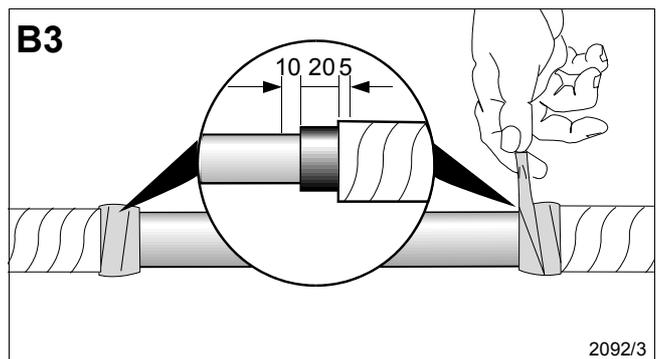
**Remove the wire binder from the end of the metal tape shield.**

Remove the release paper from the short void filling strip (yellow) with the pointed end.

Fix the metal tape shield into place by wrapping the void filler around it by 5 mm.

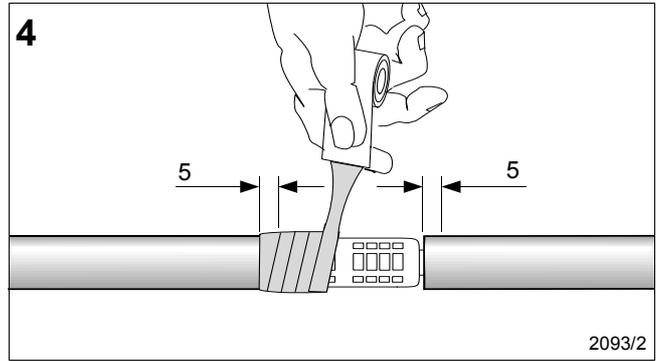
Continue over the cover screen and cover the insulation by 10 mm.

Stretch the strip to half of its original width. Wrap it around the insulation leaving a thin overlap.



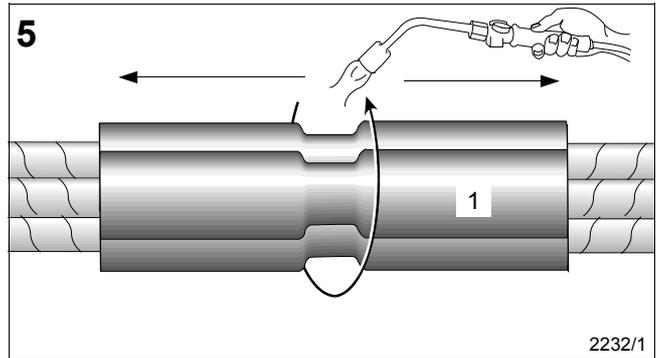
Remove one paper from the void filling tape (yellow). Apply the tape with a 50% overlap stretching it to about half of its original width. Fill up the connector area continuing onto the insulation for not more than 5 mm. Slide the stress control tubing (black) over the completed connector area before taping the other cores.

**Note:** Do not use too much void filler. The final diameter should be only slightly greater than the core or connector diameter, whichever is larger.



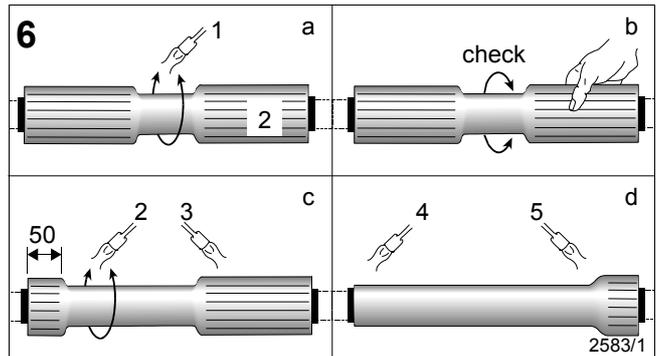
Position the stress control tubing (1) centrally over each joint. Start shrinking in the centre working towards the ends. When completed the tubing should be fully shrunk and wrinkle free.

**Note:** Take care not to accidentally shrink the other tubing at this stage. Continue with the next step while the stress control tubing is still hot.



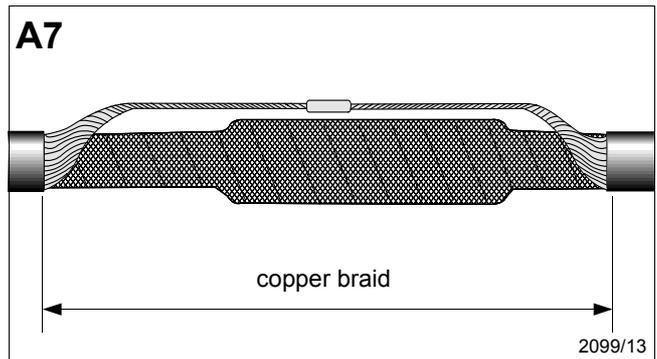
Position the screened insulating sleeve (black and red) centrally over the previously installed tubing.

- Start shrinking the sleeve in the centre (1).
- Check if fully shrunk by twisting the end. The sleeve should not move from its position.
- Continue shrinking by working towards one side (2), stopping 50 mm from the end. Shrink the other half in the same way (3).
- Shrink down the first end (4) and finally the second (5). The sleeve should be fully shrunk without leaving ridges.



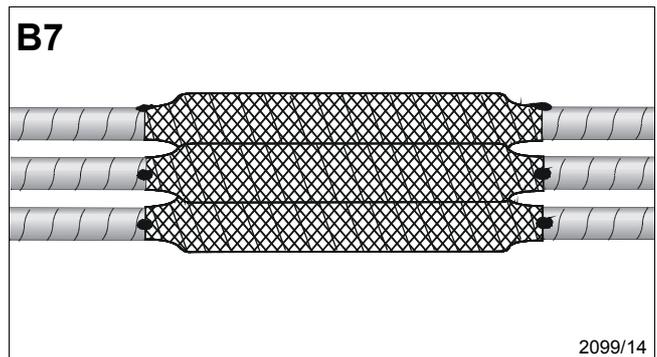
#### A. Cables with wire shields

Relay the cores as far as possible. Wrap one layer of copper braid round the cores with an overlap so that the whole joint area is covered. Fold back the shielding wires and joint the earth conductor by crimping or any other equivalent method.

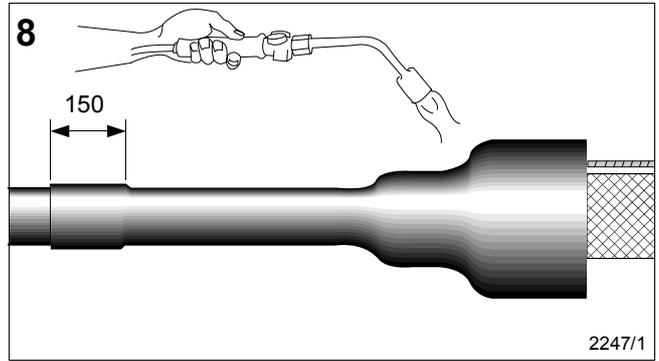


#### B. Cables with metal tape shields

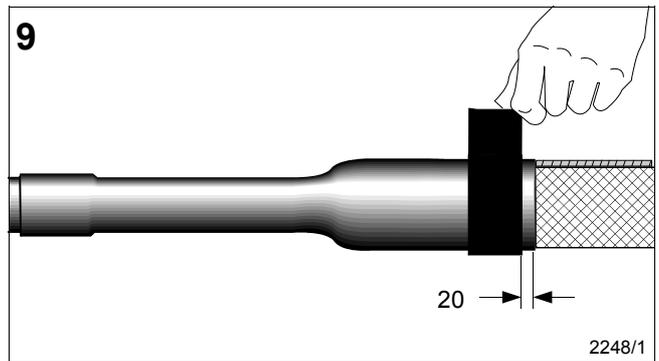
Wrap two layers of copper braid with an overlap round each joint area, continuing for 20 mm onto the metal tape shield. Attach the copper braid to the metal tape shield on both sides of the connection area by soldering or by any other equivalent method (such as Raychem solderless earth connection, see EPP 0184) to maintain shield continuity. Relay the cores as far as possible.



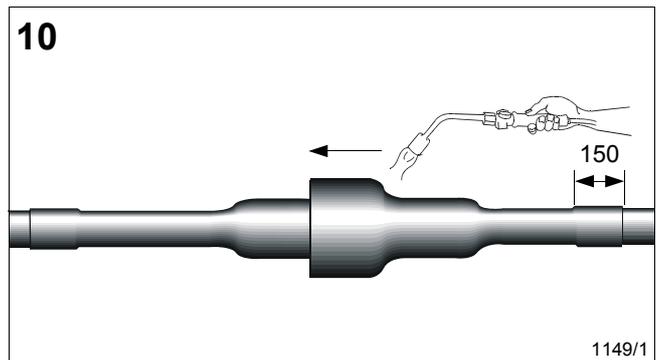
Clean and degrease the ends of the oversheath for a length of about 150 mm. Position one outer sealing sleeve so that it overlaps the end of the oversheath by about 150 mm min. Start shrinking at the oversheath end, working towards the connector area.



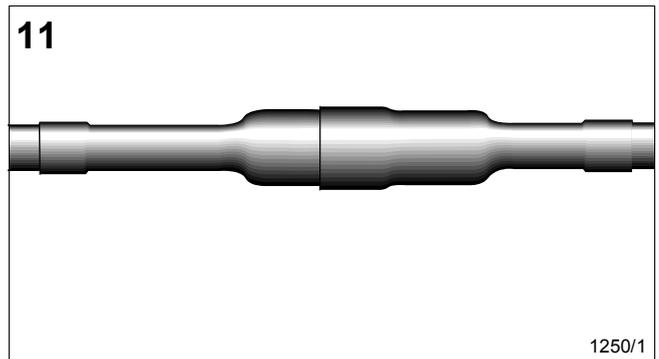
Starting 20 mm from the inner end of the outer sealing sleeve, wrap one layer of sealant tape (black) around the sleeve.



Position the second sealing sleeve so that it overlaps the other end of the oversheath by 150 mm. Start shrinking at the oversheath end, working towards the connector area.



Joint completed.  
Allow the joint to cool before applying any mechanical strain.



**Please dispose of all waste according to environmental regulations.**

