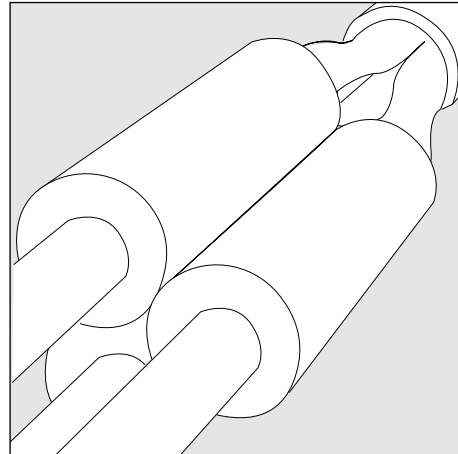




TE's Raychem Cable Accessories



Installation Instruction EPP-0257-4/18

**Joint for Screened
3-Core Plastic and
Rubber Insulated Cables
12 kV and 17.5 kV with
Wire Armour**

Type: SXSW

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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 instructions.

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

Carefully read and follow the steps in the installation instructions.

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.

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, TE Connectivity 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.

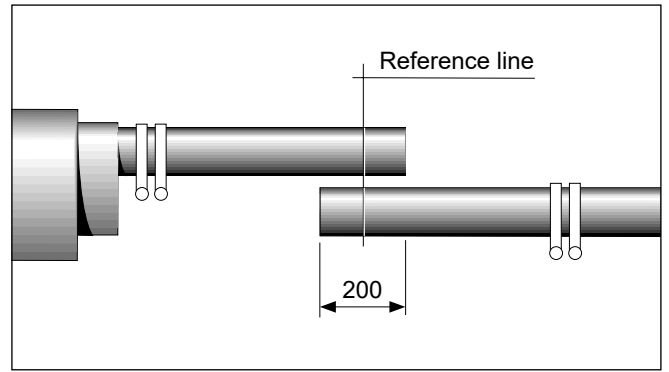
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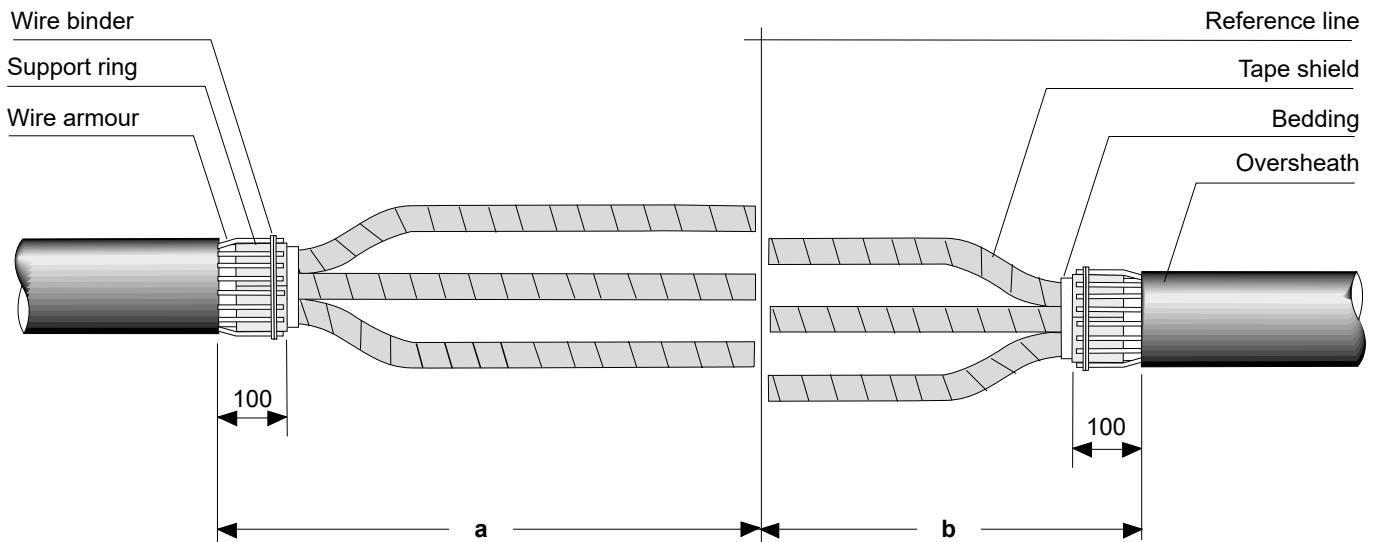
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Cable Preparation

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



A



Remove the oversheath, armour and bedding according to the dimensions given in drawing **A**.
 Do not cut the earth conductor (if any).
 Lift the armour wires and position the support rings underneath.
 Build up the bedding under the support ring with a piece of oversheath.
 Secure the ends of the armour wires with a wire binder.

Cables with wire shield

Twist the shielding wires together to form an earth conductor.
 Shape and position the cores as in drawing **A**.
 Cut the cores at the reference line.

Table 1

Kit Label	Size of Conductor	Size of Conductor	a	b
	12 kV [mm ²]	17.5 kV [mm ²]		
SXSW-4304	16–35	10–25	700	500
SXSW-4314	50–70	25–50	700	550
SXSW-4324	95–185	50–150	800	600
SXSW-4334	185–300	150–300	850	650

Core Preparation

A. Cable with wire shield

Thoroughly remove the core screen according to the dimensions given in Table 2 so that the insulation surface is free from all traces of conductive material.

Clean and degrease the insulation.

Note: Do not nick the insulation!

B. Cable with metal tape shield

Place a temporary wire binder around the metal tape shield at the point of $c + 20$ mm.

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 dimensions given in Table 2, so that the insulation surface is free from all traces of conductive material.

Clean and degrease the insulation.

Note: Do not nick the insulation!

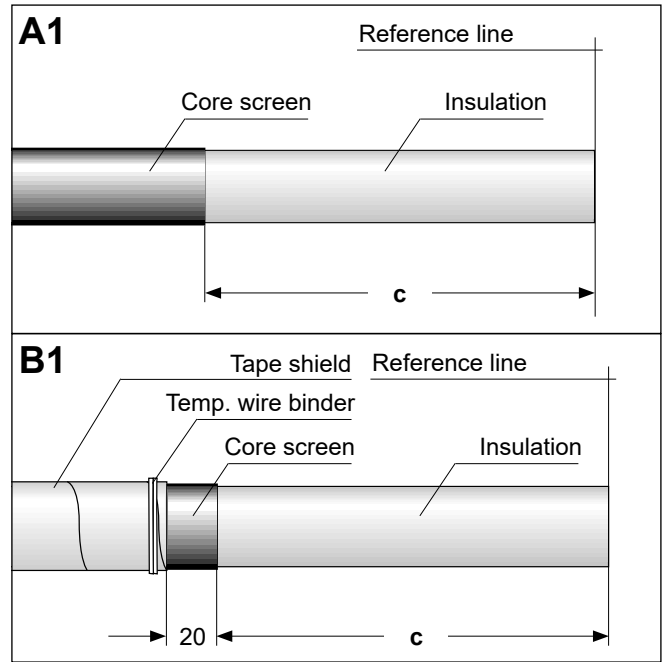


Table 2

Kit Label	Size of Conductor 12 kV	Size of Conductor 17.5 kV	c [mm]
SXSW-4304	16–35	10–25	115
SXSW-4314	50–70	25–50	120
SXSW-4324	95–185	50–150	145
SXSW-4334	185–300	150–300	155

Completion of Joint

Slide one combined tubing set over each long core end.

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

Cut the cores at the reference line.

Remove the insulation on all cores according to dimension $l = \text{half the connector length} + 5 \text{ mm}$.

For maximum connector dimensions see table below.

Joint the conductors by crimping. Remove any sharp edges. Clean and degrease the connector and the insulation.

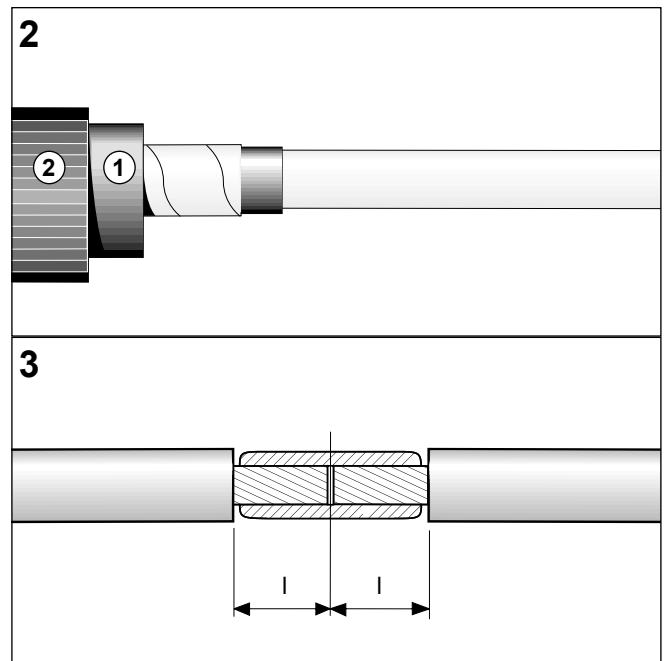


Table 3

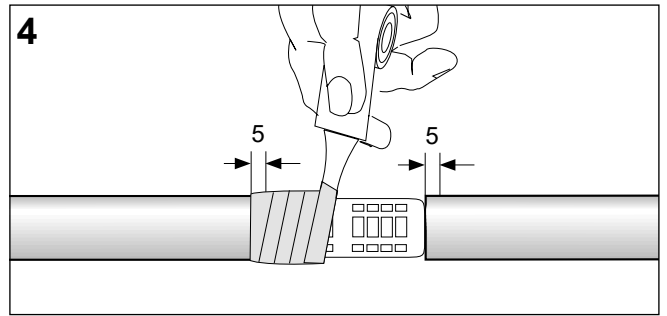
Maximum dimensions for compression connectors before installation:

Kit Label	Size of Conductor 12 kV [mm ²]	Length [mm]	Diameter [mm]	Kit Label	Size of Conductor 17.5 kV [mm ²]	Length [mm]	Diameter [mm]
SXSW-4304	16–35	100	17	SXSW-4304	10–25	90	16
SXSW-4314	50–70	110	22	SXSW-4314	25–50	90	19
SXSW-4324	95–185	160	29	SXSW-4324	50–150	140	25
SXSW-4334	185–300	180	36	SXSW-4334	150–300	160	34

Remove one paper from the longer of the void filling compound (yellow) and roll it up.
 Wrap it around the conductor 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.

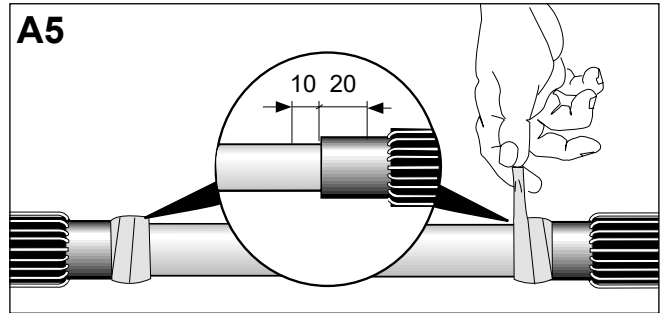
Slide the stress control tubing (black) over the completed connector area before taping the other cores.

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.



A. Cables with wire shield

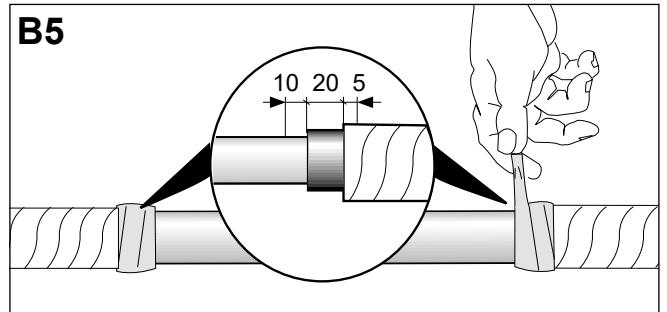
Remove the release papers from the short length of void filling compound (yellow) with the pointed end. Wrap it around the end of the core screen starting 20 mm from the end of the screen and continuing onto the insulation for 10 mm. Stretch the compound to half of its original width to achieve a fine, thin edge onto the insulation.



B. Cables with metal tape shield

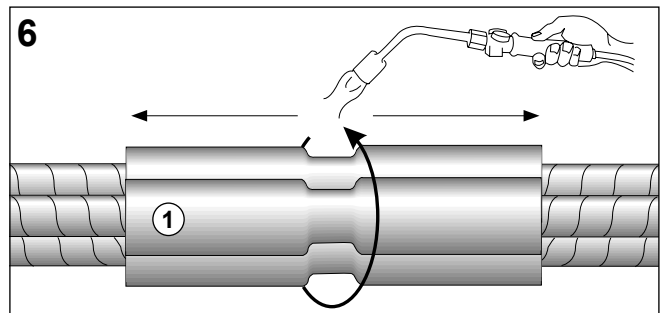
Remove the wire binder from the end of the metal tape shield.

Remove the release papers from the short yellow void filling strip with the pointed end. Fix the metal tape shield into place by wrapping the yellow void filler for 5 mm around it. Continue over the core screen covering the insulation for 10 mm. Stretch the strip to half of its original width to achieve a fine thin edge.



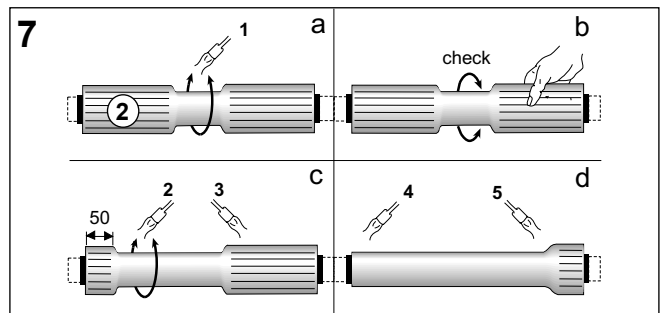
Position **all three** stress control sleeves (black) centrally over the connectors. Start shrinking in the centre working towards the ends. The sleeves should be fully shrunk and wrinkle free.

Note: Continue with the next step while the stress control sleeves are still hot.



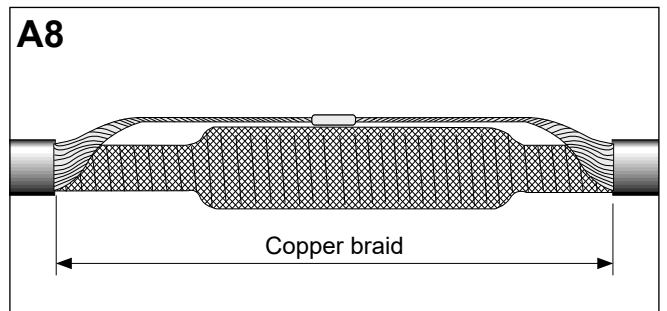
Position **all three** screened insulating sleeves (black and red) centrally over the previously installed tubing.

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



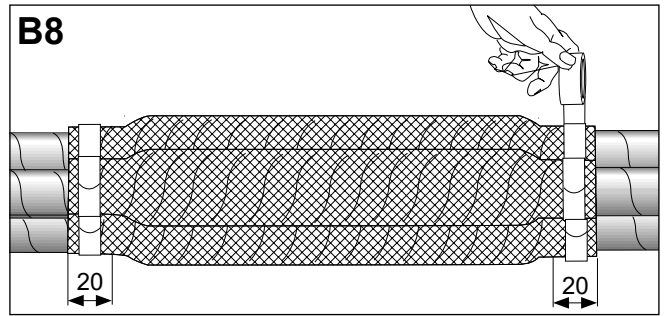
A. Cables with wire shield

Relay the cores as far as possible.
 Wrap one layer of copper braid round the cores with a 50% overlap so that the whole joint area is covered.
 Joint the earth conductors by crimping or any other equivalent method.

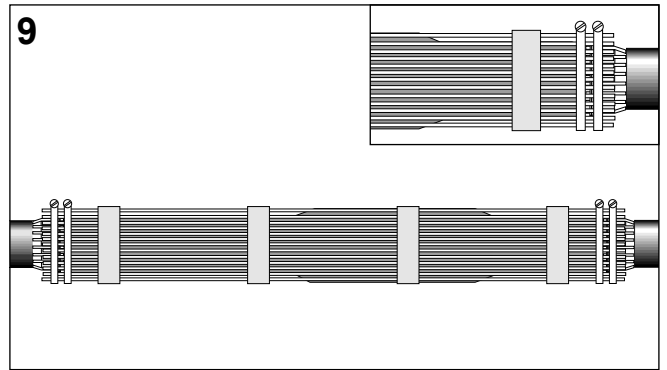


B. Cables with metal tape shield

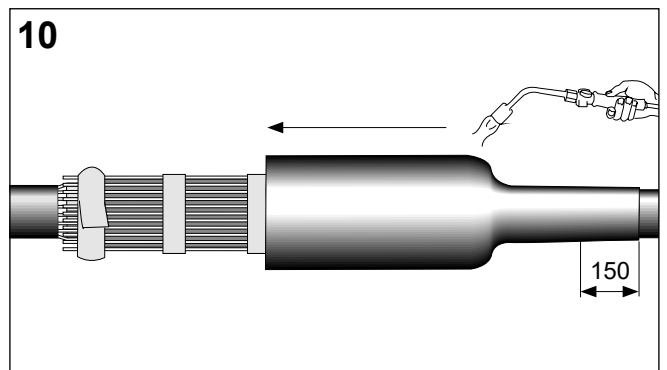
Wrap two layers of copper braid with a 50% overlap round each joint area, continuing for 20 mm onto the metal tape shield. Attach the copper braid to the metal tape shield on both sides of the connection area by soldering or any other equivalent method (such as Raychem solderless earth connection, see EPP 0184) to maintain shield continuity. Relay the cores as far as possible.



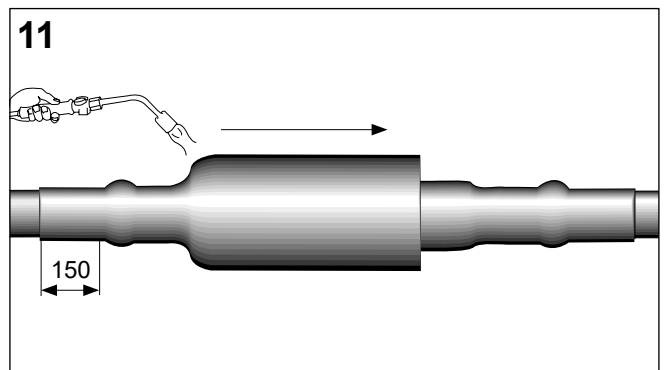
Wrap the joint case round the joint and secure with cloth tape as shown in the picture. Clamp the ends of the joint case onto the steel wire armour using the screw clips. Cover the sharp edges of the screw clips by fastening a piece of cable oversheath over the screw with the remaining cloth tape.



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

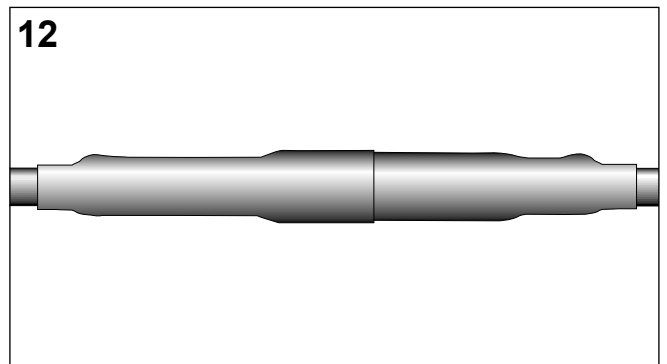


Position the second sealing sleeve so that it overlaps the other end of the oversheath by 150 mm. Start shrinking at the oversheath end, working towards the connector area.



Joint completed.

Allow the joint to cool before applying any mechanical strain.



Please dispose of all waste according to environmental regulations.

