

# TE's Raychem Cable Accessories



Installation Instruction ESD-7314-7/16

Raychem Low voltage Straight Joints 1 kV with Mechanical shear bolt connectors for four-core polymeric insulated cables with wire armour

Joint types: LJSM-(B)-4X/ ...

To view the TE Energy website:



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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 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.

## **Cable Preparation**

Overlap the cables to be jointed by about 150 mm. Mark the reference line (the middle of the overlap). Slide the outer sleeve over one cable end. Remove the oversheath and armour according to the dimensions given in drawing **A**.





Lift the armour wires and slide the support rings underneath.

If necessary build up the bedding under the support ring with a piece of oversheath.

Secure the ends of the armour wires with a wire binder. Remove the bedding level with the end of the armour wires. Shape and position the cores as shown in drawing **A** and cut them at the reference line.

## Table 1

Size of Conductor	а	b	С
[mm²]	[mm]	[mm]	[mm]
6-25	280	200	35
35-95	330	220	50
95-240	550	350	80

# Completion of the joint

Position the outer sealing sleeve over one of the cleaned cable ends. Position the inner insulation tubes over the long core ends.

#### Note:

Use only mechanical connectors supplied with the joint kit.

The screws of all connectors have to point to the outside, not in the direction to the other cores.

The screws of the connector have to touch the outer wide side of sector shaped conductors. If required sector shaped cores have to be turned to the outside.

#### **Conductor connection:**

Wire brush the aluminium conductors. Hand tighten the shear bolts so that the connector stays in place. For connectors using more than one shear bolt per side, tighten the bolts alternately and shear them off starting with the outer bolts.

(see also sequence shown in the drawing).

#### Note:

When a cordless impact wrench is in use the tightening intervals should be in the range of 2 seconds. Avoid core bending on smaller cross sections by using a support tool.

#### Note:

connector area.

The sheared-off bolts should protrude the connector for not more than 4 mm.

Clean and degrease the connector area and the core insulation.

Position the inner insulation tubes centrally over the

of the connectors, working towars the ends.

allow the inner insulation sleeves to cool down.

Shrink down the inner insualtion tubes, starting in the center

Before shaping the cores and laying them to each other,











Relay the cores as far as possible. For ease of installation hold them in place with a few layers of PVC tape.

Wrap the joint case round the joint and clamp the ends onto the armour wires using the screw clips.



Clean and degrease the ends of the oversheath for a length of about 150 mm.

Position the outer sealing sleeve centrally over the joint area. Start shrinking in the centre working towards the ends.

Allow the joint to cool before applying any mechanical strain.



Please dispose of all waste according to environmental regulations.

Joint completed.



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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.

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