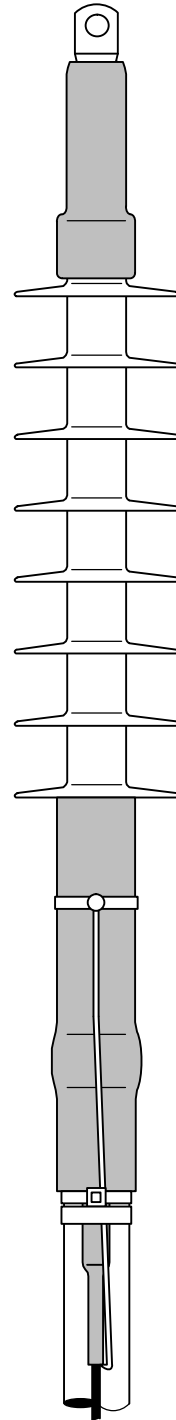


# 3M QTEN

**Installers need experience with  
High Voltage Accessories**



Kit No.	96-EP xxx-2
Conductor Cross Section (mm <sup>2</sup> )*	120 - 1500
Diameter over Primary Insulation <b>D</b> (mm)	33.0 - 87.0

\* Different cable constructions may change the actual application range.  
Diameter over Primary Insulation is the final determining factor.

**3M Deutschland GmbH**

Issue:

**1**

Issue date:

**23.05.2019**

**Please note:** This product may only be assembled by trained specialized personnel according to these assembly instructions. The preceding specifications are the result of in-depth research. They correspond to the state of our experience. A test by you will convince you of the excellent properties of the 3M products. Verify yourself whether these products are suitable for your purposes. All questions regarding a warranty liability are governed by our terms of sale, unless legal provisions provide differently.

**AABBDD71877**

1. Issue date: **23.05.19**

Language: **English**

1. Change date:

Drawn: **R. Horst**

2. Change date:

Checked: **S. Hoffmann**

3. Change date:

4. Change date:

**3M QTEN**

**Molded Rubber Termination  
for Outdoor Application**

**96-EP XXX-2**

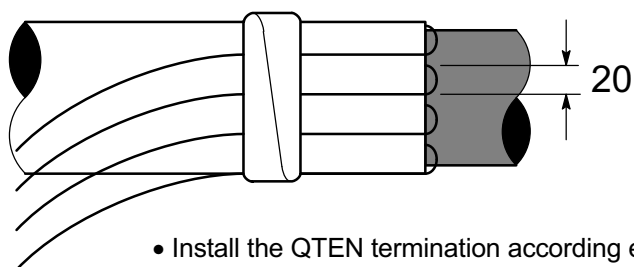
**for single core plastic insulated Al wire  
screened cables acc. to IEC 60840  
 $U_m = 72.5 \text{ kV}$**

**3M Electrical Products**

**XE-0091-4298-7**

## Instruction for QTEN Termination for plastic insulated cables with an Al-wire screen

- This instruction refers only to the variant handling of the Al-wire screen connection.

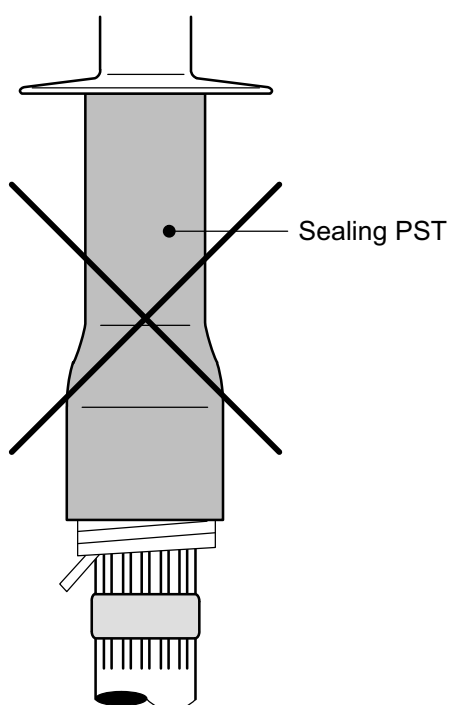


### Note:

The Al screening wires shall be folded back with a bending diameter of min. 20 mm. Sharp bends must be avoided! Avoid needless bends of the Al-wires!

- Install the QTEN termination according existing instruction included in the supplied kit UNTIL you are asked to install the bottom Sealing PST.

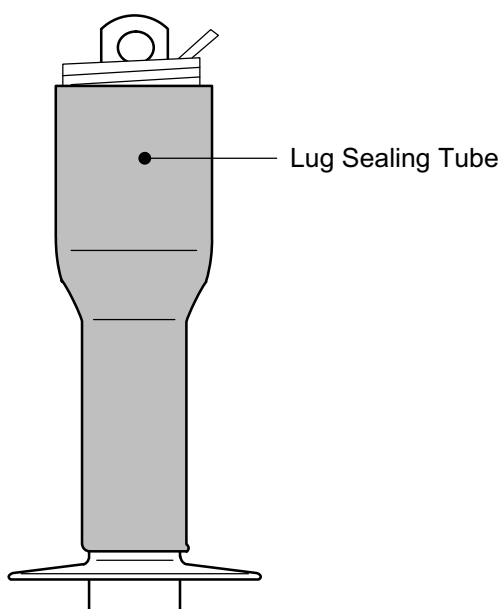
### Attention:

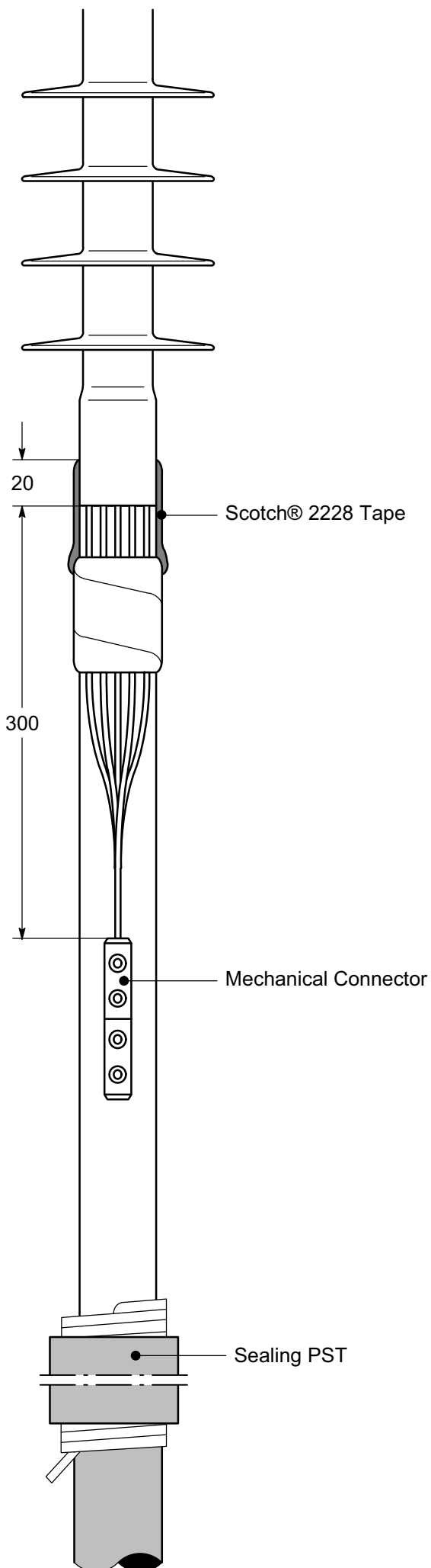


- Do not install the bottom sealing tube according existing instruction existing instruction included in the supplied kit.
- For cables with Al-wire screen refer to this instruction!

### Additional comment:

Last step according existing instruction included to the supplied kit is the installation of the Lug Sealing Tube.

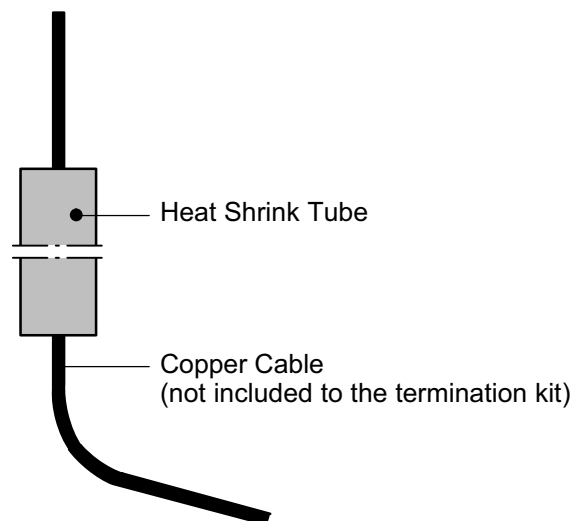


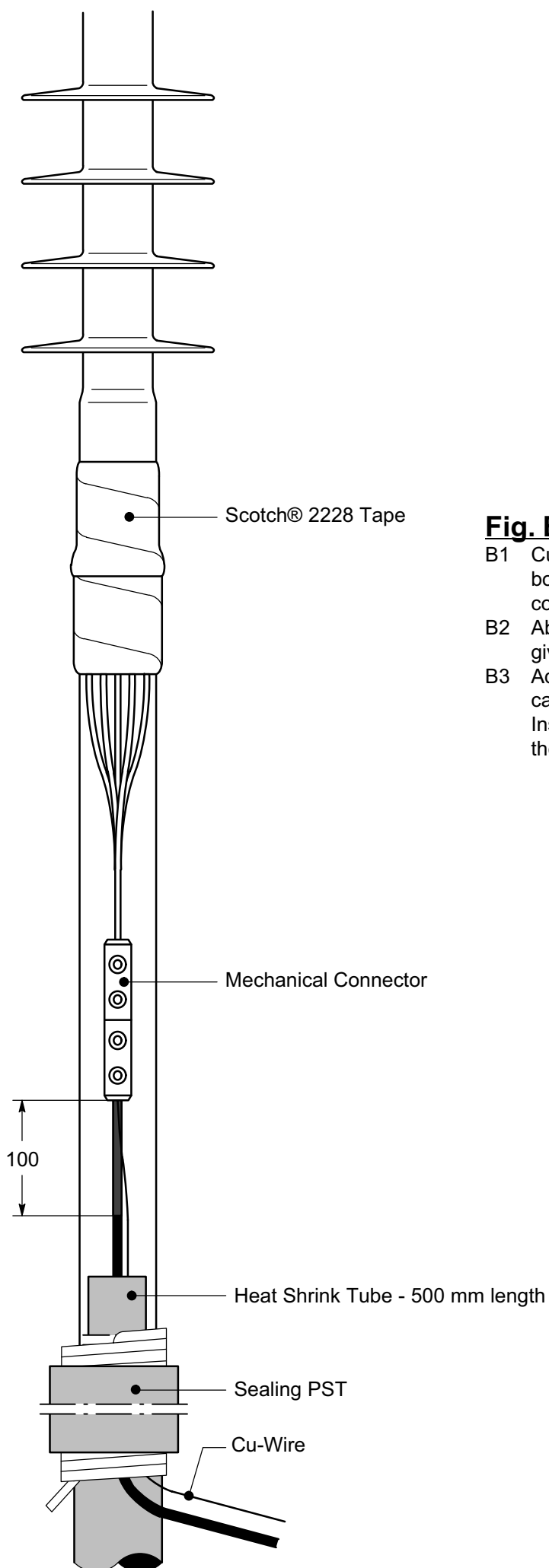


**Fig. A**

- A1 Remove the temporary binding.
- A2 Bundle the Al-wires and install the connector on the Al-wires acc. given dimension.  
Install the connector acc. manufacturers instruction.
- A3 Park the Heat shrink tube onto the copper bonding cable.

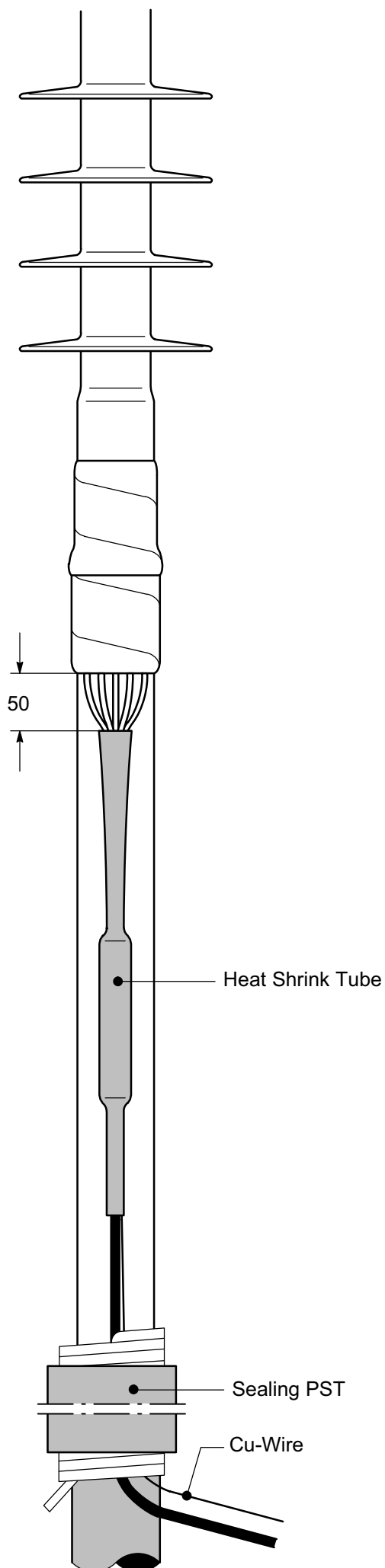
**Comment:** Copper Bonding cable is not part of the kit.





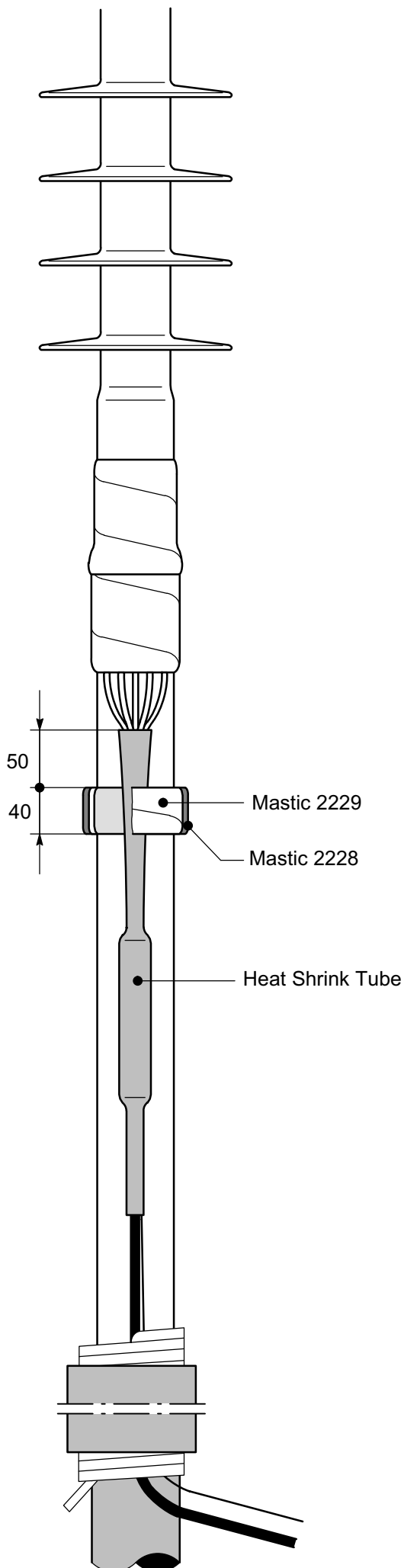
**Fig. B**

- B1 Cut back the primary insulation of the copper bonding cable acc. manufactures instruction for the connector.
- B2 Abrade the cable jacket of the bonding cable acc. given dimension.
- B3 Add the Cu-wire to the exposed wires of the bonding cable.  
Install the connector on the bonding cable including the CU-wire.



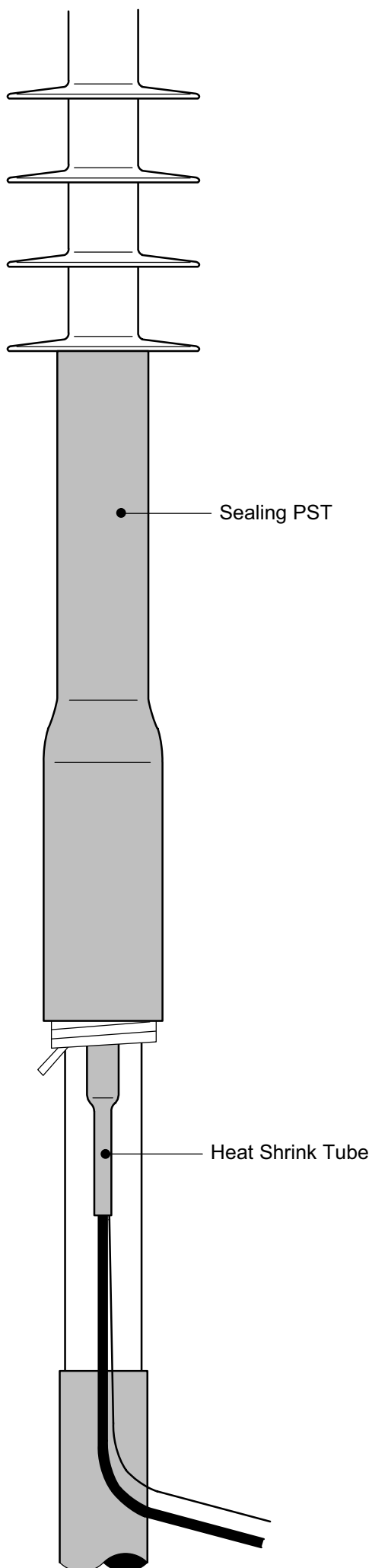
**Fig. C**

- C1 Push the heat Shrink tube over the Al-wires, the connector, and the bonding cable.
- C2 Shrink down the heat shrink tube.  
Overlap the Al-wires acc. given dimension.



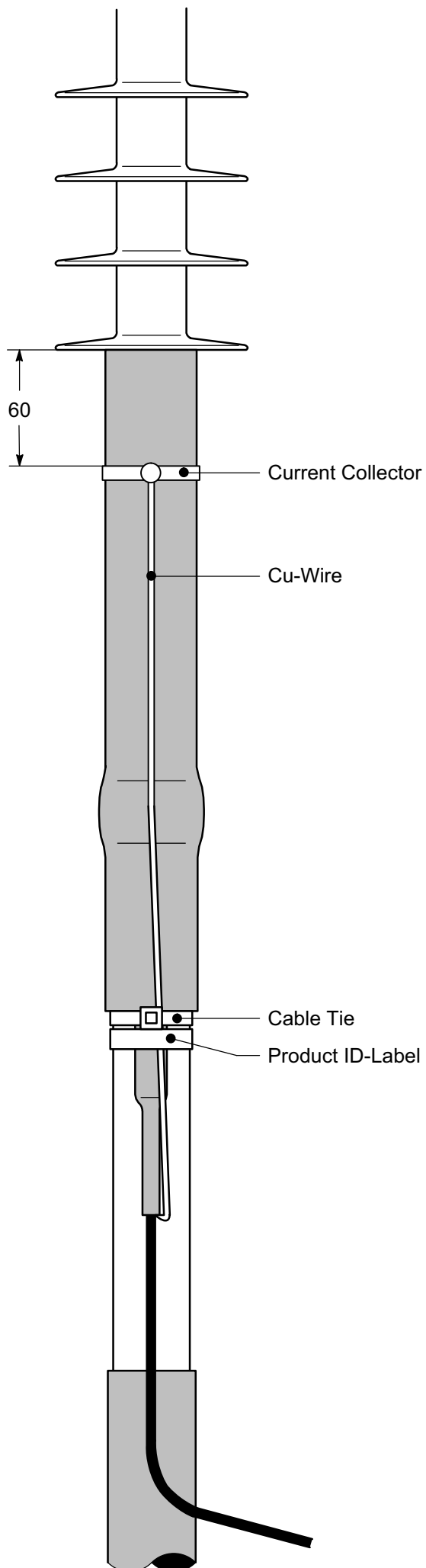
**Fig. D**

- D1 Apply three layers of Mastic 2229 slightly stretched onto the cable jacket, below the heat shrink tube and above the heat shrink tube acc. given dimension.
- D2 Apply two layers of Mastic 2229 slightly stretched onto the cable jacket and Mastic 2229, above the Heat shrink tube acc. given dimension.
- D3 Cover the Mastic 2229 with one layer of Mastic 2228 slightly stretched.



**Fig. E**

E1 Slide the parked sealing PST onto the termination.  
Start to shrink underneath the first skirt.



### **Fig. F**

- F1 Place the hose band clip as a current collector over the bottom of the termination and place it 60 mm below the bottom skirt.
- F2 Take one Cu-wire upwards and connect it to the current collector.
- F3 Carefully close the current collector. Make sure that the cold shrink tube will not be damaged.
- F4 Fix the Cu-wires with the 550 mm cable tie.
- F5 Apply and fix the product ID-label with the delivered 380 mm cable tie as shown.