

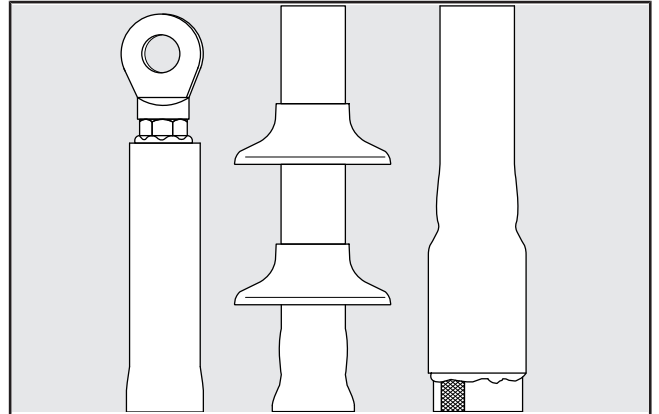


INSTALLATION INSTRUCTIONS

IXSU-F / OXSU-F

EPP-0956-5/24

**Terminations for Screened
Single Core Polymeric
Insulated Cables without
Armour for
36 kV & 42 kV**



Cable Accessories

The Information contained in these installation instructions are for use only by installers trained and qualified to make electrical power installations. A sufficient training and qualification will be assumed if installers have completed a TE Training (with certification; offered by the TE Connectivity Training Center). TE Connectivity has no control over the field conditions - such as temperature and humidity - which have an impact on the product installation. A correct installation depends on the appropriate conditions or installation equipment. These field conditions are not within the scope of TE Connectivity's responsibility. Raychem, TE, TE Connectivity and TE connectivity (logo) are trademarks.
© 2024 TE Connectivity. All Rights Reserved.

For more information: te.com/energy

Tyco Electronics Raychem GmbH
a TE Connectivity Ltd. Company
Finsinger Feld 1
85521 Ottobrunn/Munich, Germany
Tel: +49-89-6089-0

Please dispose of all waste according to environmental regulations.



Table of Contents

1	Important - Read Before Starting	3
1.1	Intended Use.....	3
1.2	Responsibility of Users and Installers	3
1.3	Read before Starting the Installation.....	3
1.4	General Instructions	3
1.5	Safety Instructions for Heat-Shrinking.....	3
2	Cable Preparation	4
2.1	Cable with wire shield	4
2.2	Cable with metal tape shield	6
3	Completion of Termination	8

1 Important - Read Before Starting

1.1 Intended Use

The kit is intended to be used only for applications as specified in the header of these installation instructions. Any use which does not comply with the intended use will result in an unsafe operation of the installed product.

1.2 Responsibility of Users and Installers

As TE is not familiar with the cables used and the individual installation and installation conditions, it is beyond TE's responsibility whether the individual installation is appropriate, in particular safe and compliant with the applicable local rules and regulations. The user and/or installer shall care for the conditions under which the individual installation will take place and safeguard a safe, appropriate, and compliant installation.

1.3 Read before Starting the Installation

Make sure that the kit complies with the cable specification. Refer to the kit label as well as the product description and the application named on the header of the installation instructions.

Please note: Components or working steps may have been modified since you last installed this product. Carefully read and follow the steps in the installation instructions.

1.4 General Instructions

Check the cable ends for moisture, if not properly sealed. In case of moisture, cut away enough cable length to remove all moist material.

When shrinking strictly follow the instructions, in particular the working direction of the shrinking procedure.

It is the installer's responsibility to find the appropriate method of cleaning all parts without leaving any residues.

Make sure there are no residues of mastic or grease on the cable. Clean and degrease the cable before applying mastic or shrinking a sleeve. If a solvent is used make sure to follow the manufacturer's instructions.

1.5 Safety Instructions for Heat-Shrinking

- Use a propane (preferred) or butane gas torch.
- Make sure that the torch is always used in a well-ventilated environment.
- Avoid pencil-like blue flames.
- Keep the flame moving continuously.
- Keep the torch aimed in the shrink direction to preheat the material.
- Tubing should be smooth and wrinkle free with inner components clearly defined.

2 Cable Preparation

2.1 Cable with wire shield

Table 1: Crimp Lug

Max. system voltage [kV]	L Indoor [mm]	L Outdoor [mm]
36	380	440
42	440	500

Table 2: Mechanical Lug BLMT

BLMT (range in mm ²)	25 to 95 L [mm]	35 to 150 L [mm]	95 to 240 L [mm]	120 to 300 L [mm]	185 to 400 L [mm]	500 to 630 L [mm]	800 L [mm]
36 kV indoor	375	370	370	370	365	360	375
36 kV outdoor	435	430	425	430	425	420	435
42 kV indoor	435	430	425	430	425	420	435
42 kV outdoor	495	490	485	490	485	480	495

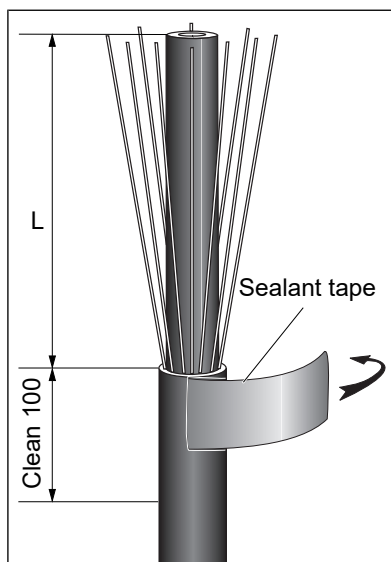


Figure 1

1. Cut the cable to the required length.
2. Remove the oversheath according to dimension L (see Table 1 or 2).
3. Clean and degrease the end of the oversheath for about 100 mm.
4. Wrap the red sealant tape around the end of the oversheath.

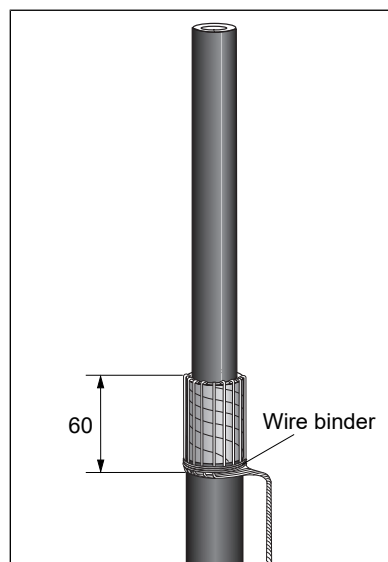


Figure 2

5. Bend the shielding wires back onto the oversheath. Avoid crossing the individual wires.
6. Fix the shielding wires with a wire binder 60 mm from the end of the oversheath.
7. Gather the shielding wires together to form an earth lead.

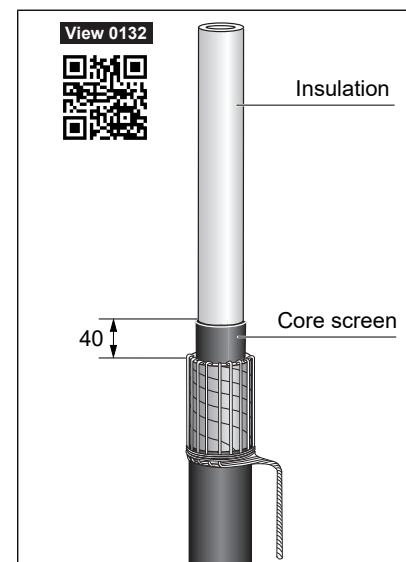


Figure 3

8. Thoroughly remove the core screen to within 40 mm of the oversheath cut. The surface of the insulation should be free from all traces of conductive material.
9. Smooth out any irregularities.

NOTICE

Damaging the insulation reduces the insulating properties.

The product may fail.

- **Do not nick the insulation.**

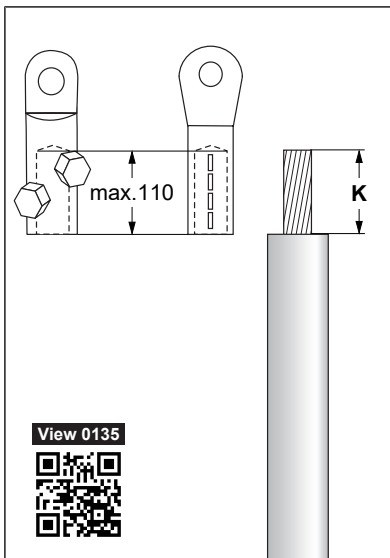


Figure 4

10. Cut back the insulation according to dimension **K**.

For Crimp lug:

K = depth of cable lug barrel hole + 5 mm.

For BLMT:

K = depth of the cable lug + 0 mm.

11. Install the cable lug.

12. Degrease and clean the core insulation and the lug.

NOTICE

Do not use cable lugs with barrel holes deeper than max. 110 mm.

NOTICE

Make sure to remove protruding bolt residues from the cable lug.

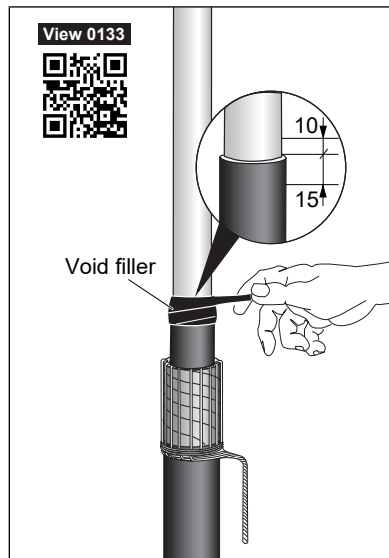


Figure 5

13. Clean and degrease the lug and insulation.

14. Remove the release paper and wrap the void filling strip around the end of the core screen.

15. Cover 15 mm of the core screen and continue onto the insulation for 10 mm. Stretch the strip to half of its original width to achieve a fine, thin edge onto the insulation.

2.2 Cable with metal tape shield

Table 3: Crimp Lug

Max. system voltage [kV]	L Indoor [mm]	L Outdoor [mm]
36	390	450
42	450	510

Table 4: Mechanical Lug BLMT

BLMT (range in mm ²)	25 to 95 L [mm]	35 to 150 L [mm]	95 to 240 L [mm]	120 to 300 L [mm]	185 to 400 L [mm]	500 to 630 L [mm]	800 L [mm]
36 kV indoor	375	370	370	370	365	360	375
36 kV outdoor	435	430	425	430	425	420	435
42 kV indoor	435	430	425	430	425	420	435
42 kV outdoor	495	490	485	490	485	480	495

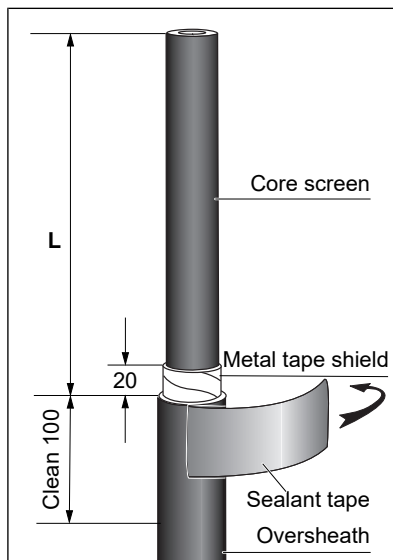


Figure 1

1. Cut the cable to the required length.
2. Remove the overshooth according to dimension **L** (see **Table 3 or 4**).
3. Remove the metal tape shield to within 20 mm of the overshooth cut.
4. Clean and degrease the end of the overshooth for about 100 mm.
5. Wrap the sealant tape (red) around the end of the overshooth.

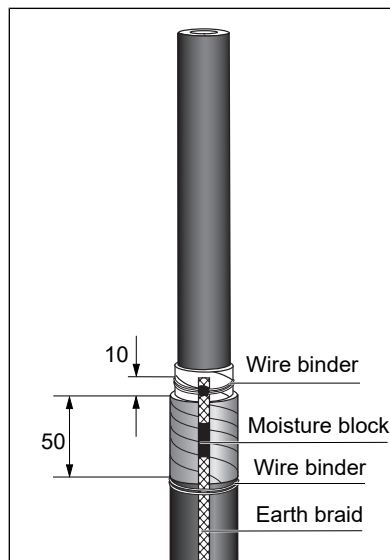


Figure 2

6. Bind and solder the earth braid to the metal tape shield (or attach the earth lead by any other equivalent method).
7. Fill the earth braid with solder to form a 30 mm moisture block 20 mm from the overshooth end.
8. Tie the earth braid with a wire binder to the overshooth directly below the sealant tape.

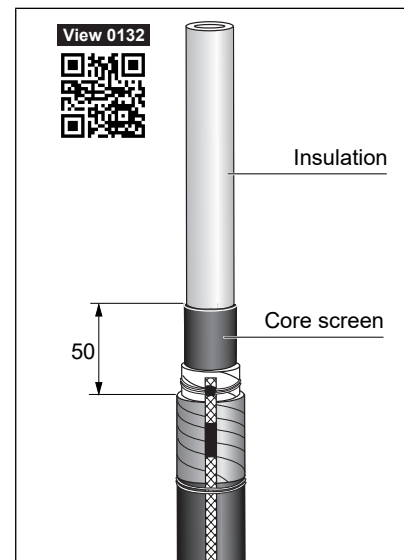


Figure 3

9. Thoroughly remove the core screen to within 50 mm of the overshooth cut.
10. The surface of the insulation should be free from all traces of conductive material.
11. Smooth out any irregularities.

NOTICE

Damaging the insulation reduces the insulating properties.

The product may fail.

- **Do not nick the insulation.**

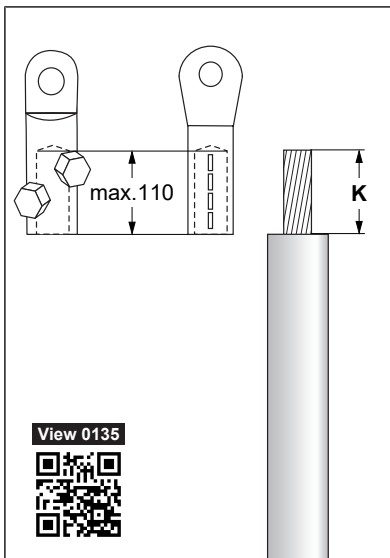


Figure 4

12. Cut back the insulation according to dimension **K**.

For Crimp lug:

K = depth of cable lug barrel hole + 5 mm.

For BLMT:

K = depth of the cable lug + 0 mm.

13. Install the cable lug.

14. Degrease and clean the core insulation and the lug.

NOTICE

Do not use cable lugs with barrel holes deeper than max. 110 mm.

NOTICE

Make sure to remove protruding bolt residues from the cable lug.

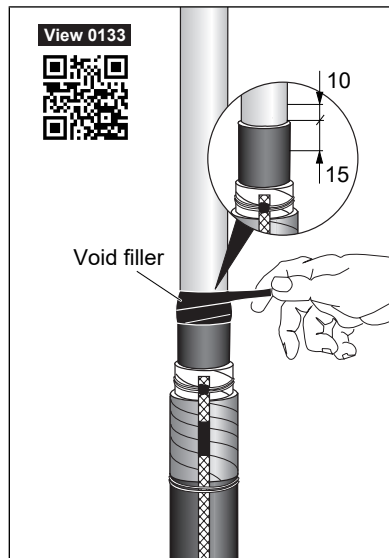


Figure 5

15. Clean and degrease the lug and insulation.

16. Remove the release paper and wrap the void filling strip around the end of the core screen.

17. Cover 15 mm of the core screen and continue onto the insulation for 10 mm.

18. Stretch the strip to half of its original width to achieve a fine, thin edge onto the insulation.

3 Completion of Termination

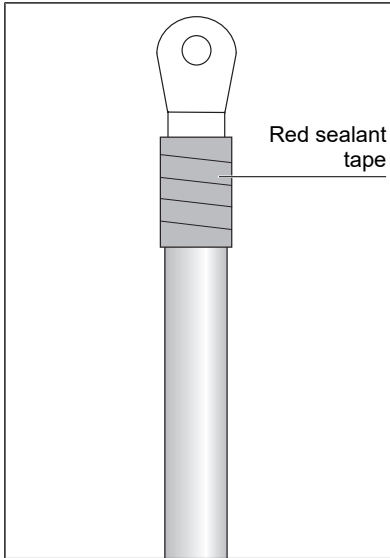


Figure 1

Shim of the cable lug barrel:

1. Use additional red sealant tape to shim the cable lug barrel for following voltage levels and cross sections.

Table 5

Voltage level in kV	Cross section in mm ²
36	35 to 50
42	35 to 50

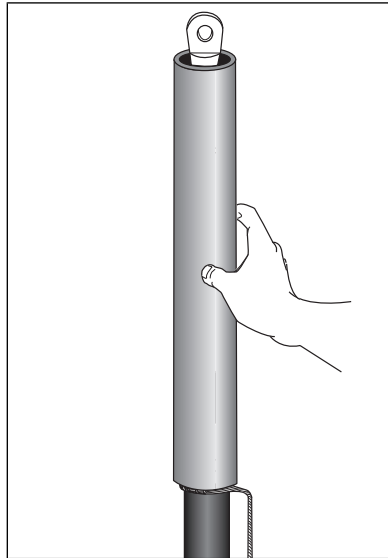


Figure 2

2. Preheat the cable lug slightly before placing the tubing over the core.
3. The bottom end of the tubing should be level with the wire binder.

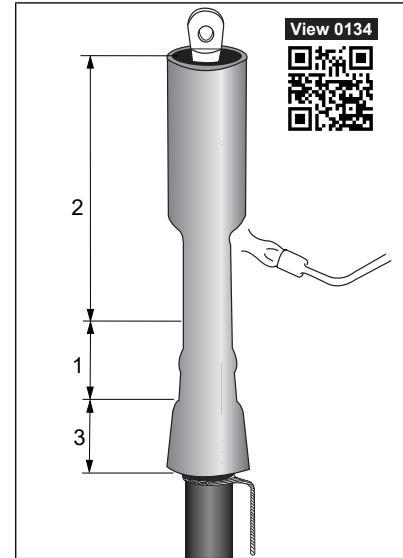


Figure 3

4. Shrink the tubing down starting at the screen cut **using a soft yellow flame**. Heat the area well but avoid scorching of surface. Continue shrinking towards the cable lug. Finally shrink down the bottom end of the tubing.
5. The numbers in the drawing indicate the shrink sequence.

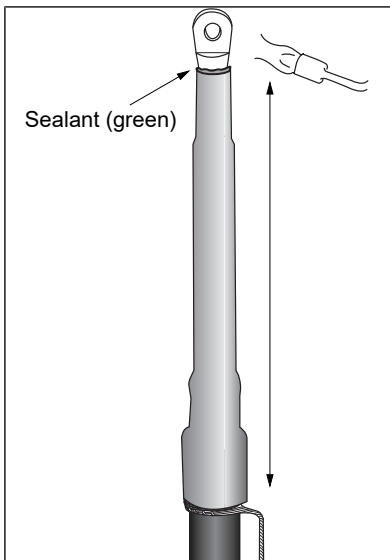


Figure 4

6. After installation, the **termination** as well as the **palm** of the cable lug must be post-heated until a **bead of sealant (green) appears** around the top of the tubing.

⇒ **Indoor termination completed.**

NOTICE

Allow the termination to cool before you apply any mechanical strain.

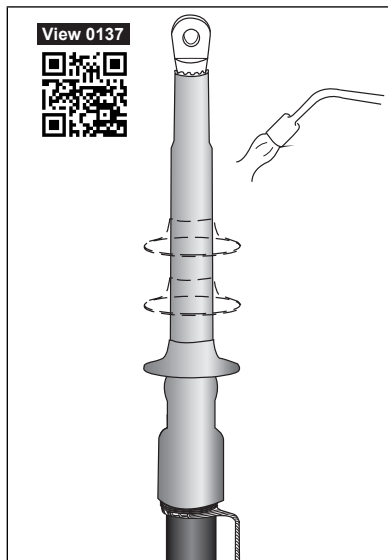


Figure 5

For outdoor terminations:

7. Shrink the skirts into place at the position shown in the drawings on the next page. Start with the first skirt on the lowest position.

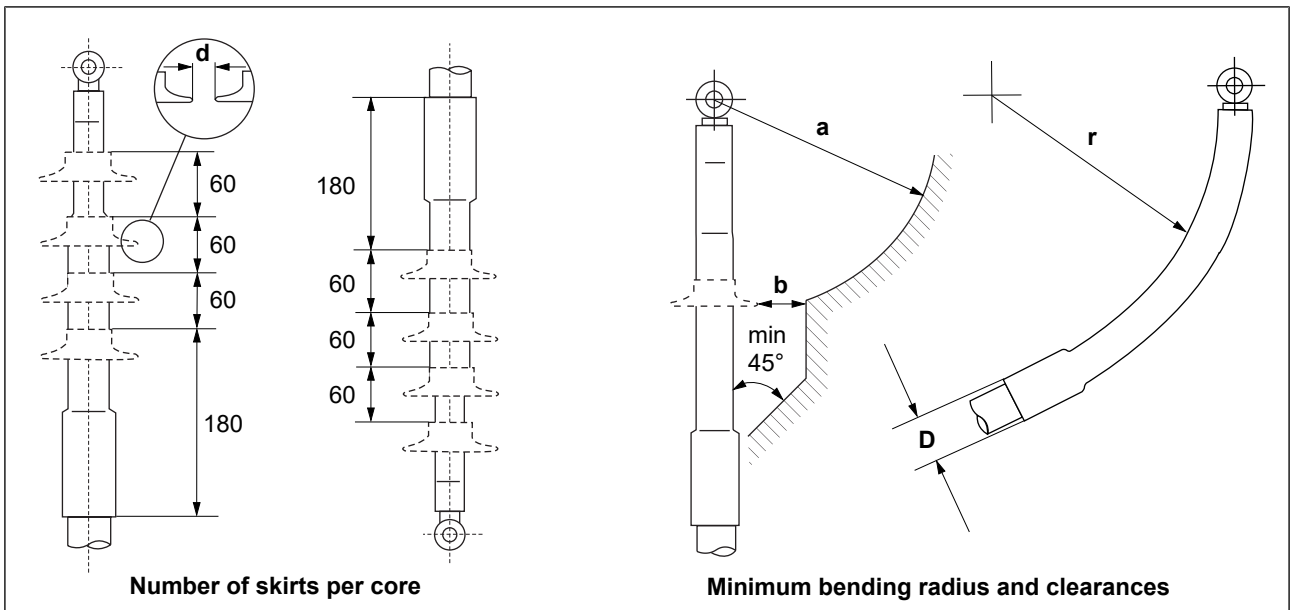


Figure 6

Table 6

Number of skirts per core		
kV	Indoor	Outdoor
36	0	4
42	0	4

Table 7

Min. clearances	Max. system voltage in kV	
	36	42
a Air clearance	as for local specifications	
b ph/ph and ph/ground in mm	35	45
d Between skirts in mm	25	35
r (min. bending radius) = $15 \times D$		