

**CAUTION:**

**Read instructions thoroughly and completely prior to beginning installation.**

## **Installation instructions**

# **PEXEM-SR**

## **Heat-shrinkable indoor and outdoor terminations**

**For screened single core polymeric insulated cables with and without armour  
7,2 kV - 36 kV**



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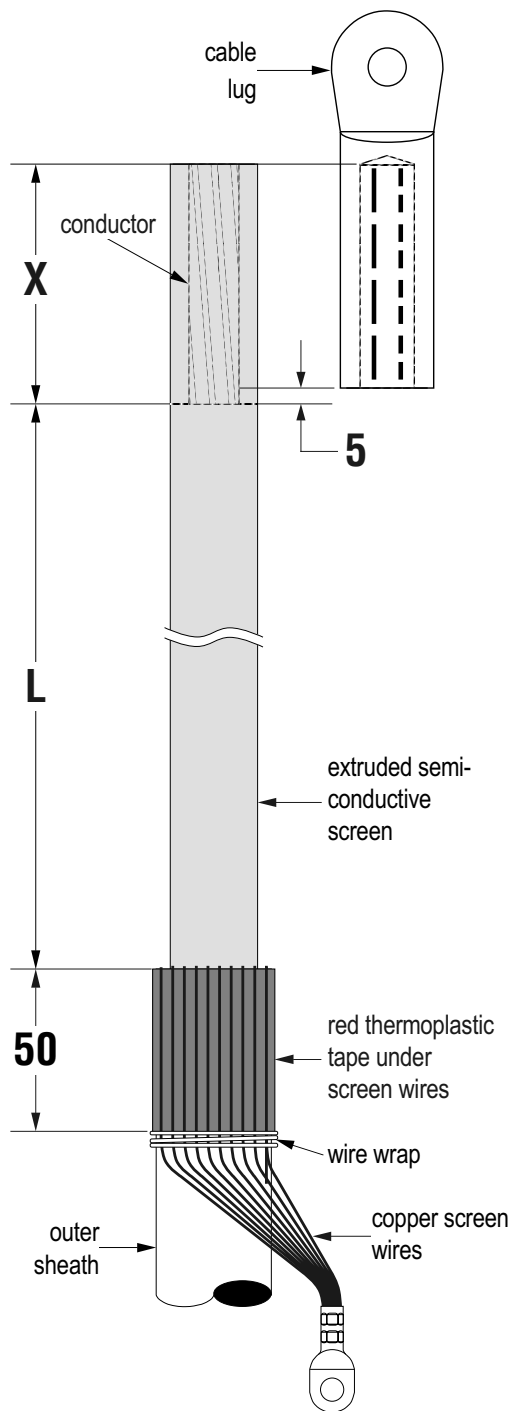
90825E-R/0

This product should be installed only by competent personnel trained in good safety practices involving high voltage electrical equipment. These instructions are not intended as a substitute for adequate training or experience in such safety practices. These instructions do not attempt to provide for every possible contingency.

Failure to follow these instructions could result in damage to the product and serious or fatal injury.

**IMPORTANT :** Cable and associated apparatus must be de-energised, locked out, and tagged prior to product installation.

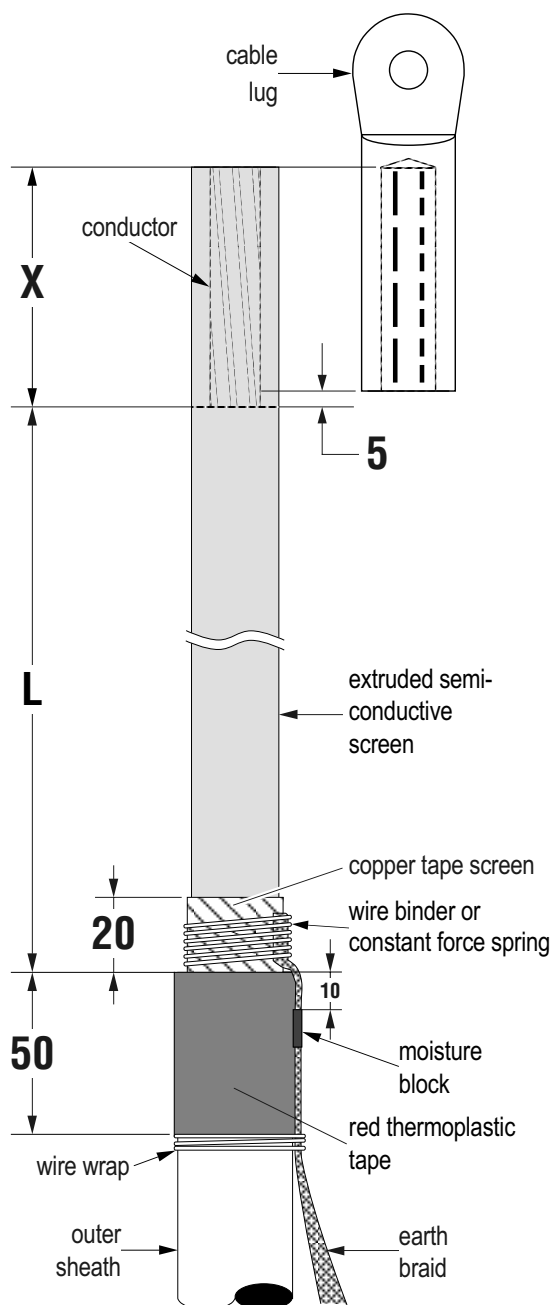
## A. Cable with copper wire screen



1. Remove the outer cable sheath over a distance **L + X** (**L** = see table 1 below, **X** = depth of cable lug barrel + **5** mm). Remove bedding tape and copper strip. Clean the outer cable sheath over a distance of **50** mm and apply a layer of red thermoplastic tape (with a 50 % overlap).
2. Bend back the copper wires over the sheath in a parallel way so that each wire rests upon the thermoplastic tape. Fix with a wire wrapping (2 to 3 windings) at about **50** mm below the cutback edge of the sheath. Twist the copper wires together, cut at the right length, install the cable lug and connect to earth. For outdoor cables with armour also connect the earth braid/wire screen to the armour by soldering or other equivalent method.
3. Remove conductive tapes and elements, if any, for longitudinal water tightness.

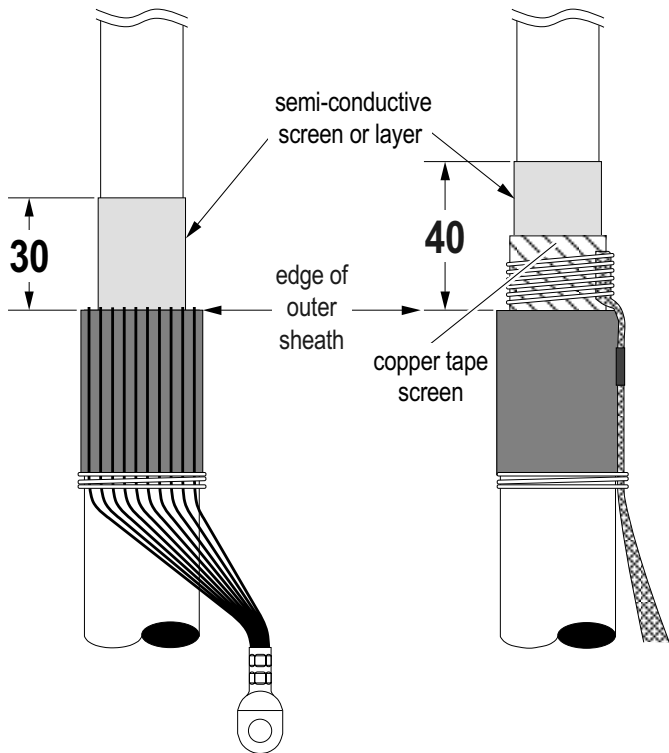
Voltage (max.) (kV)	<b>L</b> indoor (mm)	<b>L</b> outdoor (mm)
7.2	250	300
17.5	250	300
24	300	350
36	350	480

## B. Cable with copper tape screen



1. Remove the outer cable sheath over a distance  $L + X$  ( $L$  = see table 1 below,  $X$  = depth of cable lug barrel + 5 mm). Remove bedding tape. Clean the outer cable sheath over a distance of 50 mm and apply a layer of red thermoplastic tape (with a 50% overlap). Remove the copper tape screen over a distance up to 20 mm from the outer sheath.
2. Connect the earth braid to the copper tape screen, either by a copper wire binder and soldering or by a constant force spring (see appropriate installation instructions). For cables with armour also connect the earth braid to the armour by soldering or other equivalent method. Apply solder to the braid to form a moisture block at about 10 mm below the cable sheath edge. Attach the braid with a wire wrapping at 50 mm below the outer cut back edge.
3. Remove conductive tapes and elements, if any, for longitudinal water tightness.

Voltage (max.) (kV)	<b>L</b> indoor (mm)	<b>L</b> outdoor (mm)
7.2	250	300
17.5	250	300
24	300	350
36	350	480



A. Copper wire screen cable

B. Copper tape screen cable

### 3. Removal of the outer semi-conductive screen/layer :

#### 3.1. Easy strip semi-conductive screen :

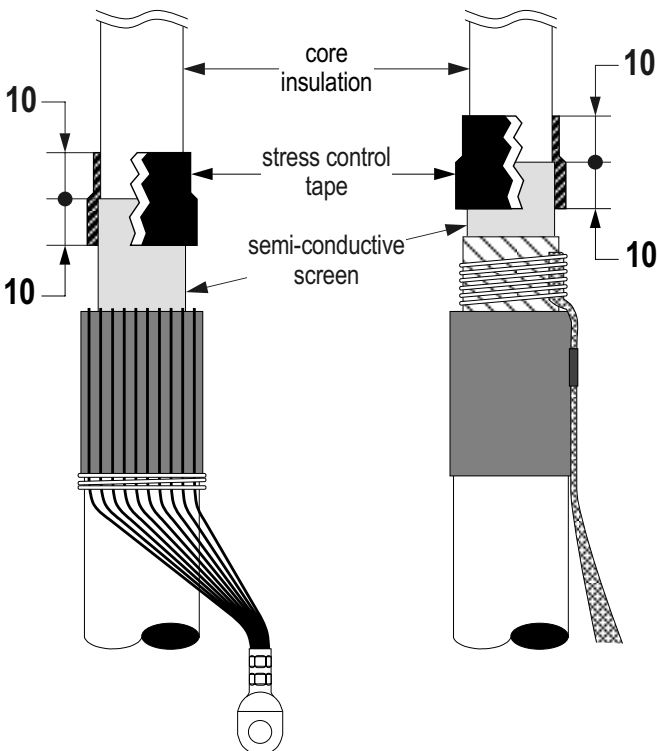
- Remove the semi-conductive screen with a suitable tool from the edge of the outer sheath up to a distance of **30 mm** for copper wire screened cable or **40 mm** for copper tape screened cable, without damaging the core insulation.
- Clean the insulation but avoid contact with the semi-conductive screen.

#### 3.2. Bonded semi-conductive screen :

- Remove the semi-conductive screen with a suitable shaving tool from the edge of the outer sheath up to a distance of **30 mm** for copper wire screened cable or **40 mm** for copper tape screened cable, without damaging the core insulation. The transition from the semi-conductive screen to the insulation has to run out conical.
- Scrape off possible remainders of the conductive screen carefully.
- Clean the insulation but avoid contact with the semi-conductive screen.

#### 3.3. Graphite semi-conductive layer :

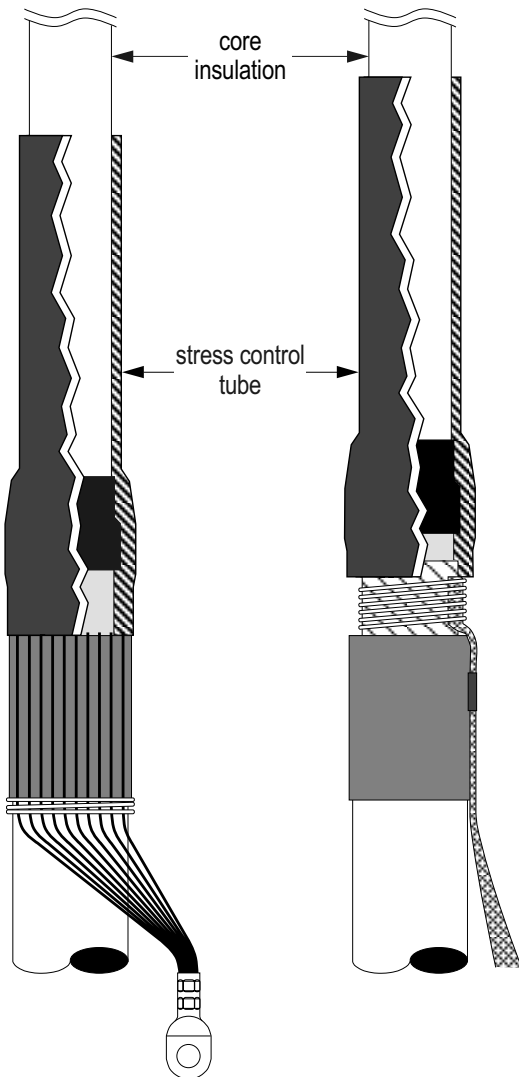
- Protect the graphite layer with adhesive vinyl tape (adhesive outside) from the edge of the outer sheath up to a distance of **30 mm** for copper wire screened cable or **40 mm** for copper tape screened cable and wash off the remaining layer with solvent. Remove the adhesive vinyl tape.



A. Copper wire screen cable

B. Copper tape screen cable

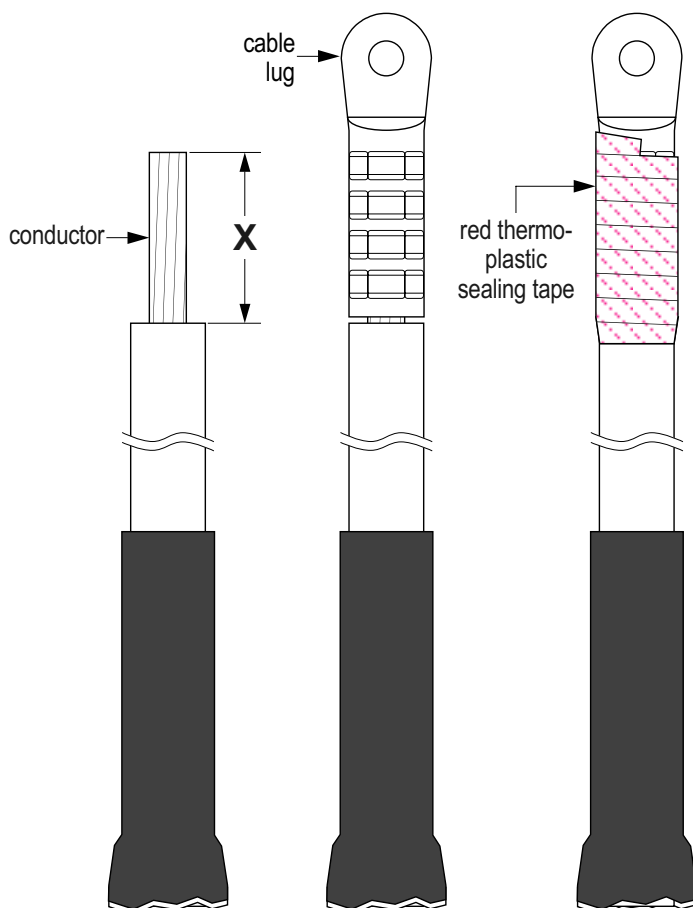
4. Wrap, while stretching, one layer of stress control tape on the cutback edge of the semi-conductive screen (not on graphite semi-conductive layer) **10 mm** above and **10 mm** below the transition point.



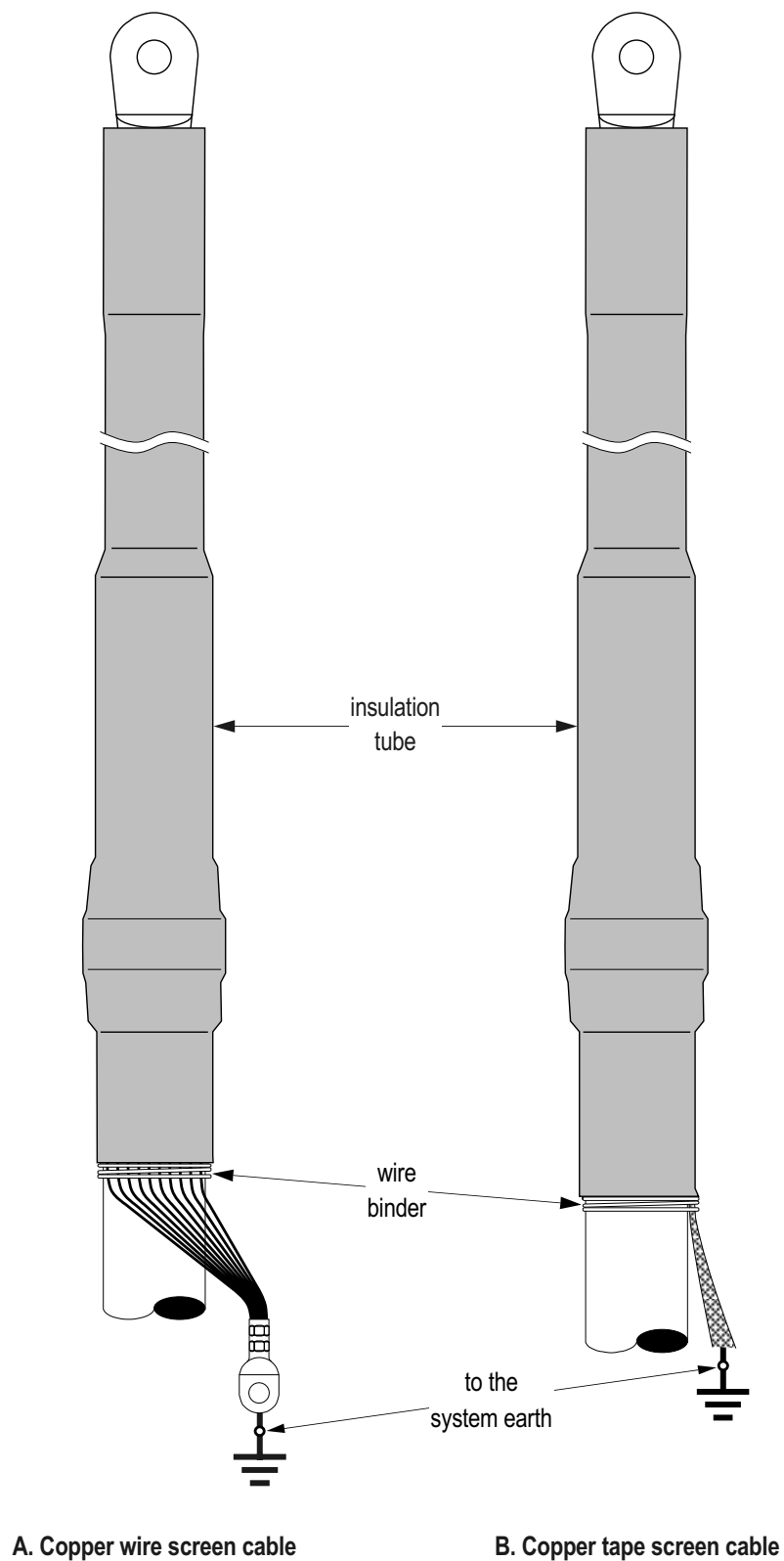
5. Place the stress control tube (black) over the core and position it according to drawing. Shrink down the tubings starting at the bottom and working upwards.

A. Copper wire screen cable

B. Copper tape screen cable

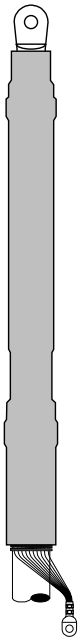


6. Cut back the core insulation over a distance **X** ( $X = \text{cable lug barrel depth} + 5 \text{ mm}$ ) and bevel the insulation end slightly. Install and crimp the cable lug and remove any sharp edges. Clean the lug barrel and the core insulation. Apply two layers of red thermoplastic tape with a 50% overlap on the cable lug barrel. Apply a layer of red thermoplastic tape over the screen wires or copper braid.

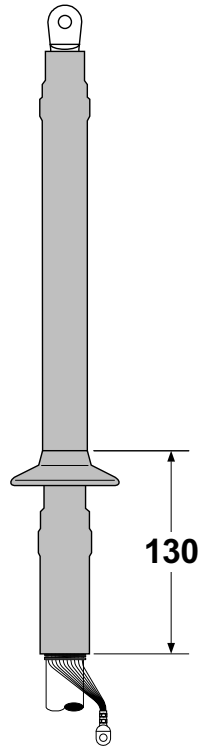


7. Position the insulating tubes with the bottom level with the wire binder and shrink in place starting from below towards the cable lug. Cut any excess tube on the cable lug. For indoor terminations above 17.5 kV and outdoor type install the sheds and shrink them in place according to the dimensions given on the drawing next page.
8. Connect cable screen to the system earth.

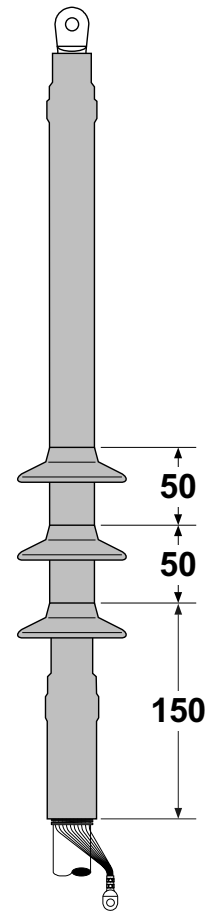
## INDOOR



**7.2 & 12/17.5 kV**

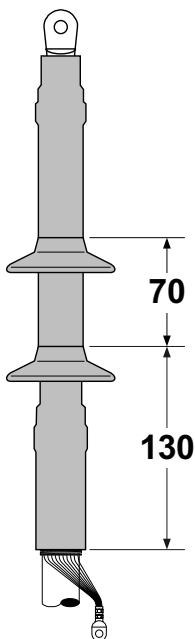


**24 kV**

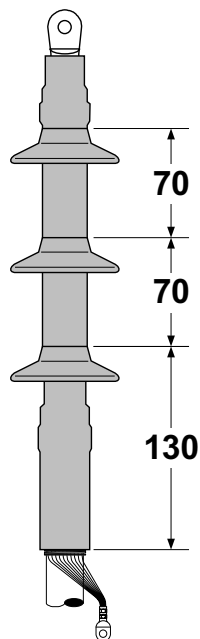


**36 kV**

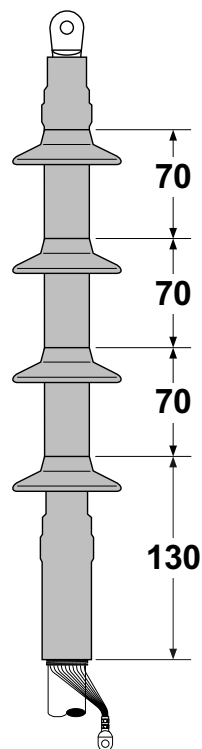
## OUTDOOR



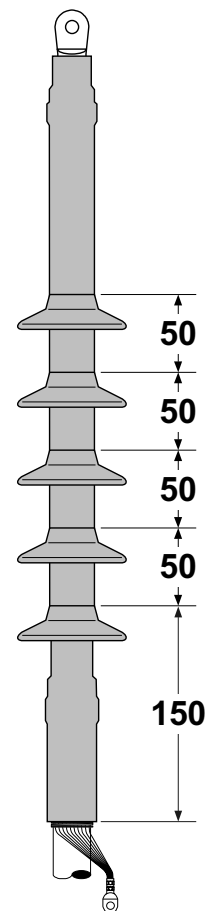
**7.2 kV**



**12/17.5 kV**



**24 kV**



**36 kV**