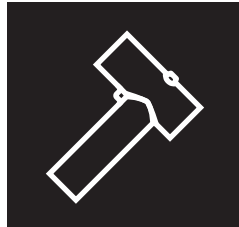


CAUTION : Read instructions thoroughly and completely prior to beginning installation.

## Installation instructions for separable tee connector - type C interface




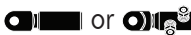











# (K),(M)430TB/G

Up to 36 kV

Only to be used on copper wire screened cable with extruded easy strip or bonded semi-conductive screen.

### Required components for the connector installation :

 3 x Tee connector housing - 430BT	 3 x Cable reducer 430CA-W	 3 x Clamping screw - 430TCS	 or  3 x Conductor contact - TBC-X or TMBC-X	 1 x Installation rod <small>(optional use for conductor sizes 185 up to 300 mm<sup>2</sup>)</small>
 or  3 x Basic insulating plug+ cap - 300BIPR (up to 24 kV)      3 x Basic insulating plug+ cap - 300BIPA (up to 36 kV)	 Water sealing mastic, type MWS (optional)	 Field control mastic, type MFC	 Roll adhesive tape	
 Silicone grease + wipers	 Installation instructions			

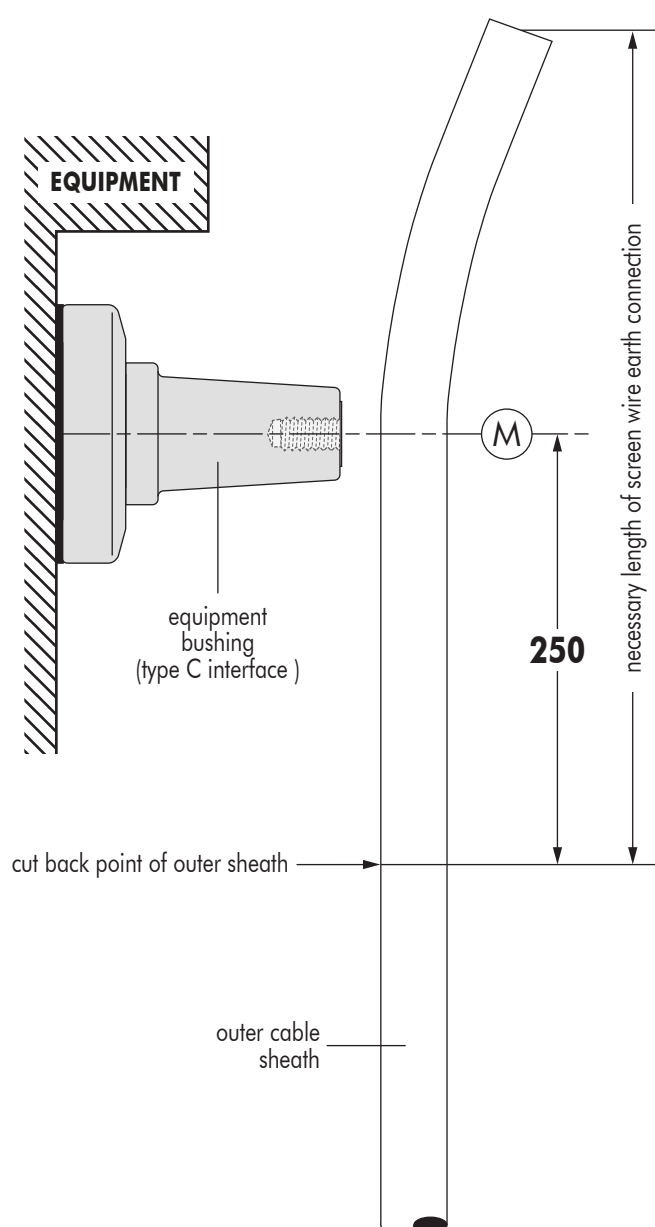
**T&D** THORNE & DERRICK UK

Tel: +44 (0)191 490 1547  
Fax: +44 (0)191 477 5371  
Email: [northernsales@thorneandderrick.co.uk](mailto:northernsales@thorneandderrick.co.uk)  
Website: [www.cablejoints.co.uk](http://www.cablejoints.co.uk)  
[www.thorneandderrick.co.uk](http://www.thorneandderrick.co.uk)

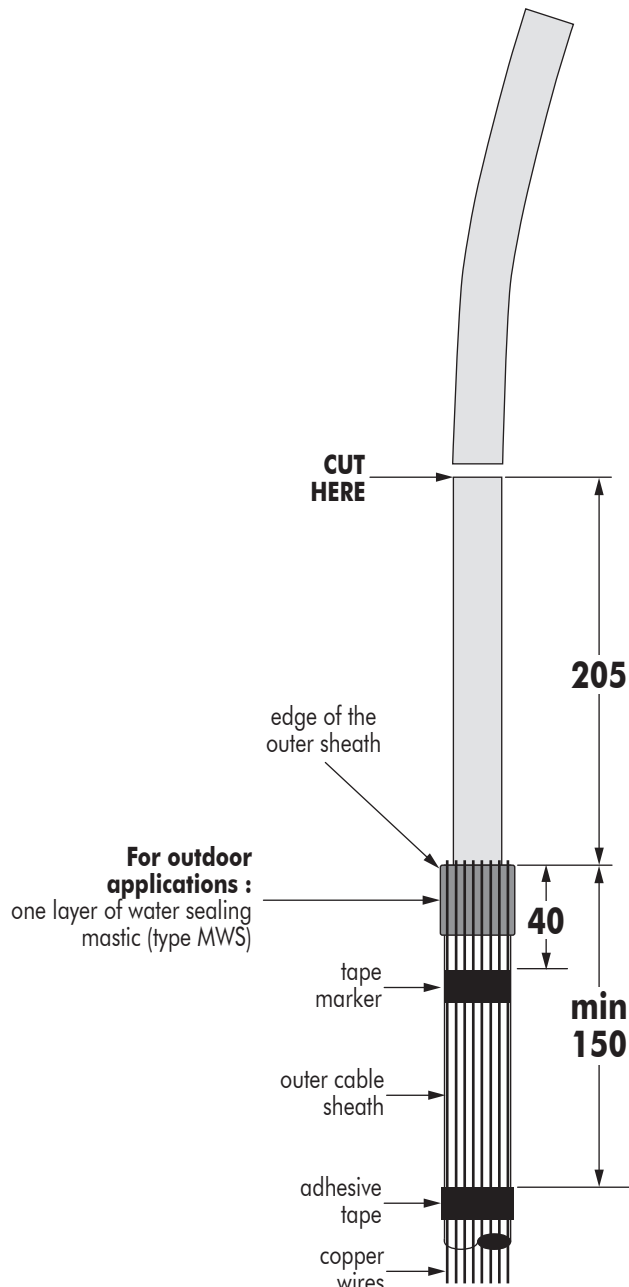
**Euromold**  
a Nexans company

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.

FOR INFORMATION ONLY Please always use the instructions supplied in the kit



- 1 Train the cable into the approximate finished position next to the equipment bushing. Be sure to allow enough extra length of concentric wires to connect to earth.
- 2 Mark centre line « M » of the bushing.
- 3 Remove the outer cable sheath to a point **250** mm from the centre line « M » of the bushing.



- 4 Apply a tape marker around the outer sheath **40** mm from the edge. For indoor applications, bend the screen wires back over the outer sheath and proceed to step no. 5.

**For outdoor applications:**

- Wrap one layer of water sealing mastic (type MWS) around the outer sheath, flush with the end (**25** mm minimum width). Completely encircle the cable.
- Bend the screen wires back over the mastic and along the outer sheath, pressing them into the mastic.
- **Important:** screen wires should not touch each other when pressed into the mastic to prevent water ingress.

- 5 Using adhesive tape, fix the screen wires at a distance of min **150** mm from the edge of the outer sheath.
- 6 Cut the cable to a point **205** mm from the outer sheath.

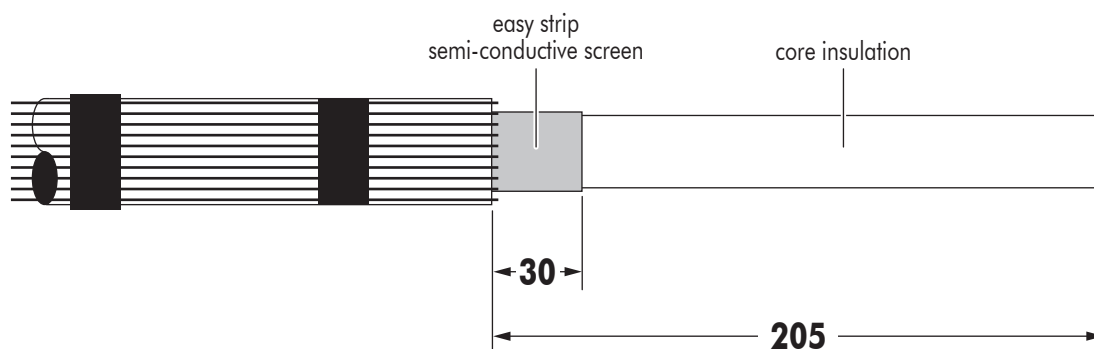


**FOR INFORMATION ONLY** Please always use the instructions supplied in the kit



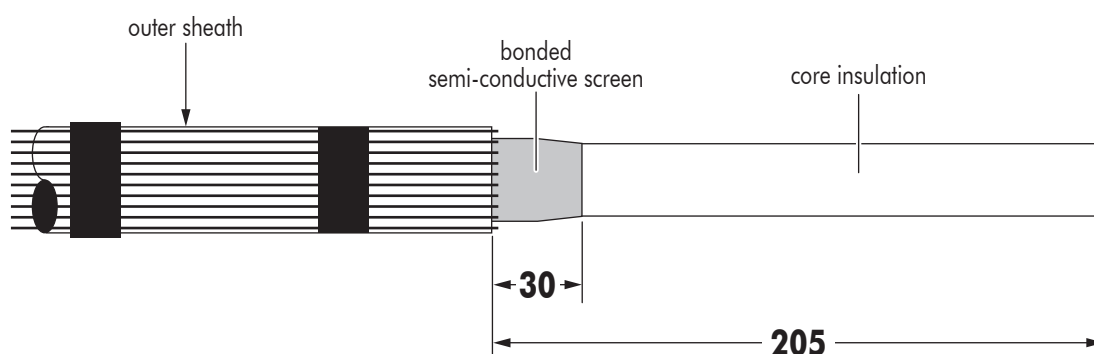
## CABLE PREPARATION

### For extruded easy strip semi-conductive screen



- 1 Check distance of **205** mm.
- 2 Remove the easy strip semi-conductive screen to a point **30** mm from the outer sheath. Cut squarely taking care not to cut the core insulation.

### For bonded extruded semi-conductive screen



- 1 Check distance of **205** mm.
- 2 Remove the bonded semi-conductive screen to a point **30** mm from the outer sheath. Use an appropriate pencilling tool.
- 3 **Remove any traces of conductive residue from the core insulation.**

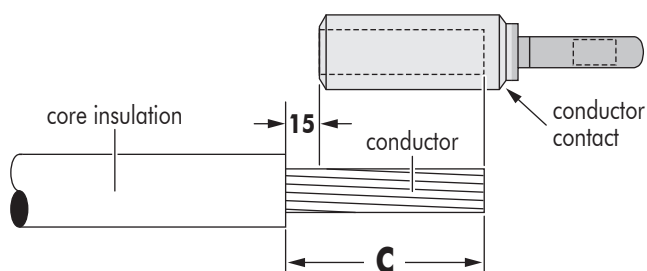


FOR INFORMATION ONLY Please always use the instructions supplied in the kit



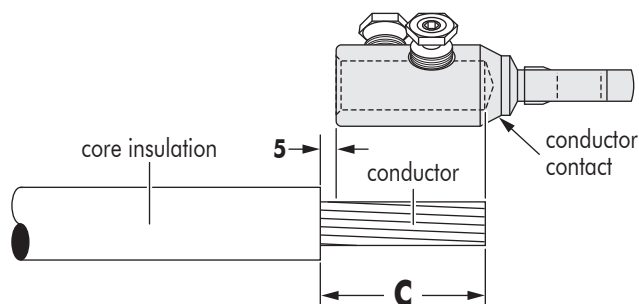
## REMOVAL OF THE CORE INSULATION

### A. Compression type contacts (Type TBC-X)

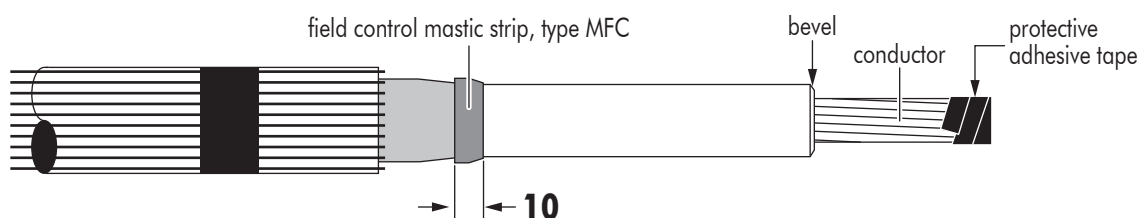


- 1 A. Remove the core insulation from the conductor for a distance « C » mm (C = depth of contact bore + 15 mm).

### B. Mechanical type contacts (Type TMBC-X)



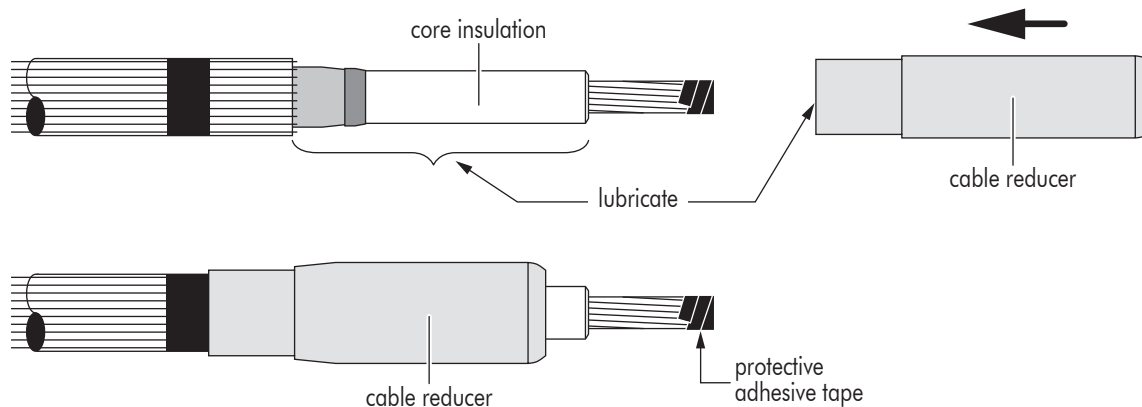
- 1 B. Remove the core insulation from the conductor for a distance « C » mm (C = depth of contact bore + 5 mm).



- 2 Slightly bevel the edge of the core insulation.
- 3 **Thoroughly clean core insulation.** Always wipe towards the screen wires.
- 4 As a protection, wrap a few turns of adhesive tape around the conductor end.
- 5 Remove field control mastic strip, type MFC, from coated paper.
- 6 Slightly stretch one end of the strip, making sure not to break it.
- 7 Apply the mastic on the cutback edge of the semi-conductive screen, covering approximately 5 mm of the extruded semi-conductive screen and 5 mm of the core insulation.
- 8 Push the mastic in place while stretching it progressively until both ends overlap and tear-off the excess mastic.
- 9 Using the coated side of the paper, squeeze the mastic tightly in place on the step of the semi-conductive screen.

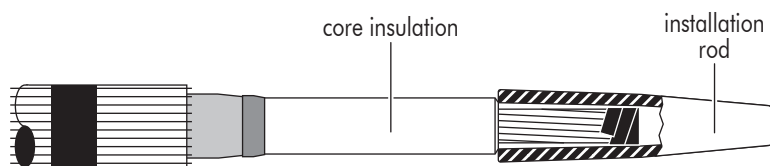
## INSTALLATION OF THE CABLE REDUCER

For conductor sizes 35 up to 150 mm<sup>2</sup>

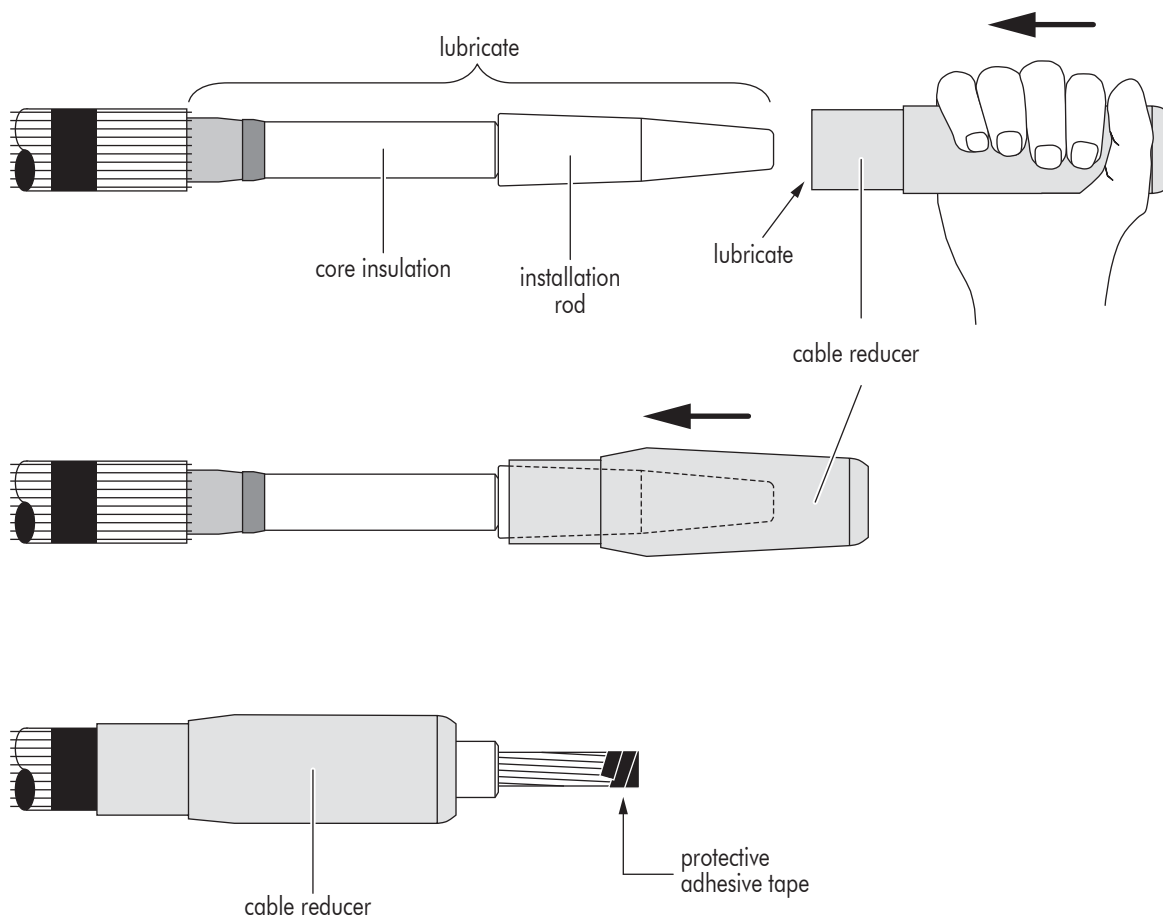


- 1 Lubricate\* the indicated area : core insulation, mastic, semi-conductive screen and inner surface of the reducer.
- 2 Slide the reducer down the cable.
- 3 Remove protective adhesive tape from the conductor.

For conductor sizes 185 mm<sup>2</sup> up to 300 mm<sup>2</sup>



- 1 Slide the installation rod on to the conductor until it butts against the core insulation.



- 2 **Thoroughly clean installation rod and core insulation.** Always wipe towards the screen wires.
- 3 Lubricate\* the indicated area : installation rod, core insulation, mastic, semi-conductive screen and inner surface of the reducer.
- 4 Slide the reducer on to the installation rod.
- 5 Slide the reducer down the cable. Take care to slide the reducer without hesitation and in one smooth move.
- 6 Remove installation rod and protective adhesive tape from the conductor.

\* USE ONLY THE SILICONE LUBRICANT SUPPLIED



FOR INFORMATION ONLY Please always use the instructions supplied in the kit

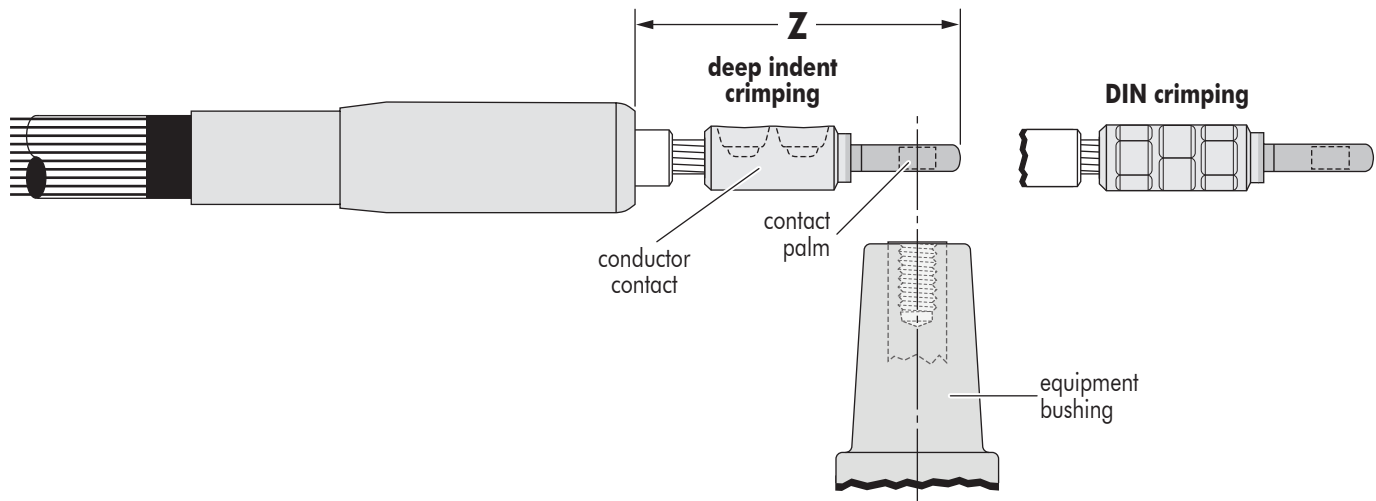


## CRIMPING/TIGHTENING OF THE CONTACT

# A

### Compression type contacts (Type TBC-X)

Please refer to the crimp chart supplied with the contact.



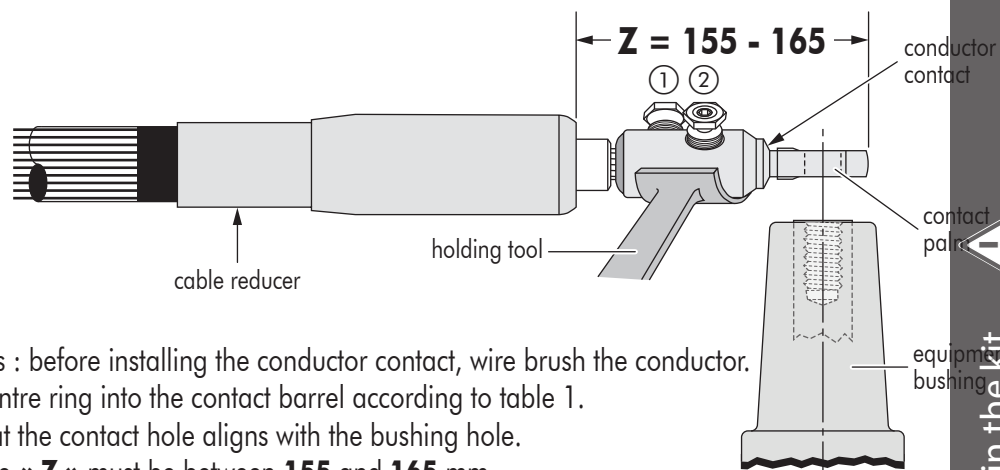
- 1 For aluminium conductors : before installing the conductor contact, wire brush the conductor.
- 2 Fit the contact on to the conductor.
- 3 Position the crimp contact taking care that the contact hole aligns with the bushing hole.
- 4 Prior to crimping distance « Z » must be between **150** and **160** mm.
- 5 Crimp the contact. Please refer to the crimp chart for crimp sequence.
- 6 After crimping distance « Z » must be between **155** and **165** mm.  
If necessary, adjust the position of the cable reducer until distance « Z » is within the tolerance range.
- 7 **Remove any burrs left after crimping and wipe-off excess inhibitor.**

FOR INFORMATION ONLY Please always use the instructions supplied in the kit

## B

## Mechanical type contacts (Type TMBC-X)

Before tightening



- 1 For aluminium conductors : before installing the conductor contact, wire brush the conductor.
- 2 Insert, if necessary, the centre ring into the contact barrel according to table 1.
- 3 Position the contact so that the contact hole aligns with the bushing hole.
- 4 Before tightening, distance « Z » must be between **155** and **165** mm.
- 5 Tighten the screws slowly and alternately, with the tool according to table 2, until the heads shear off. It is recommended to use the holding tool for ease of installation. Tighten first screw ① then ②.
- 6 When the screws do not shear off flush with the barrel surface, apply one layer of vinyl tape around the barrel in order to protect the inside surface of the connector body during installation.

TMBC-16.95-14-5-LV

Table 1





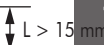
35 - 50 mm <sup>2</sup>	70 - 95 mm <sup>2</sup>
grey  Small bore	yellow  Large bore

Table 2

Al : 35 - 50 mm <sup>2</sup> Cu : 35 - 50 mm <sup>2</sup>	Al : 70 - 95 mm <sup>2</sup> Cu : 70 - 95 mm <sup>2</sup>
	 SW 6 

TMBC-50.150-14-5-LV

Table 1





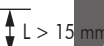
50 mm <sup>2</sup>	70 - 95 mm <sup>2</sup>	120 - 150 mm <sup>2</sup>
grey  Small bore	yellow  Large bore	No centre ring necessary

Table 2

Al : 50 - 120 mm <sup>2</sup> Cu : 50 - 95 mm <sup>2</sup>	Al : 150 mm <sup>2</sup> Cu : 120 mm <sup>2</sup>
	 SW 6 

TMBC-95.240-14-5-LV

Table 1





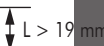
95 mm <sup>2</sup>	120 - 150 mm <sup>2</sup>	185 - 240 mm <sup>2</sup>
red  Small bore	brown  Large bore	No centre ring necessary

Table 2

Al : 95 - 185 mm <sup>2</sup> Cu : 95 - 150 mm <sup>2</sup>	Al : 240 mm <sup>2</sup> Cu : 185 - 240 mm <sup>2</sup>
	 SW 6 

TMBC-120.300-12-5

Table 1




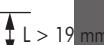
120 - 150 mm <sup>2</sup>	185 - 300 mm <sup>2</sup>
blue  Small bore	No centre ring necessary

Table 2

Al : 120 - 240 mm <sup>2</sup> Cu : 120 - 240 mm <sup>2</sup>	Al : 300 mm <sup>2</sup> Cu : 300 mm <sup>2</sup>
	 SW 6 

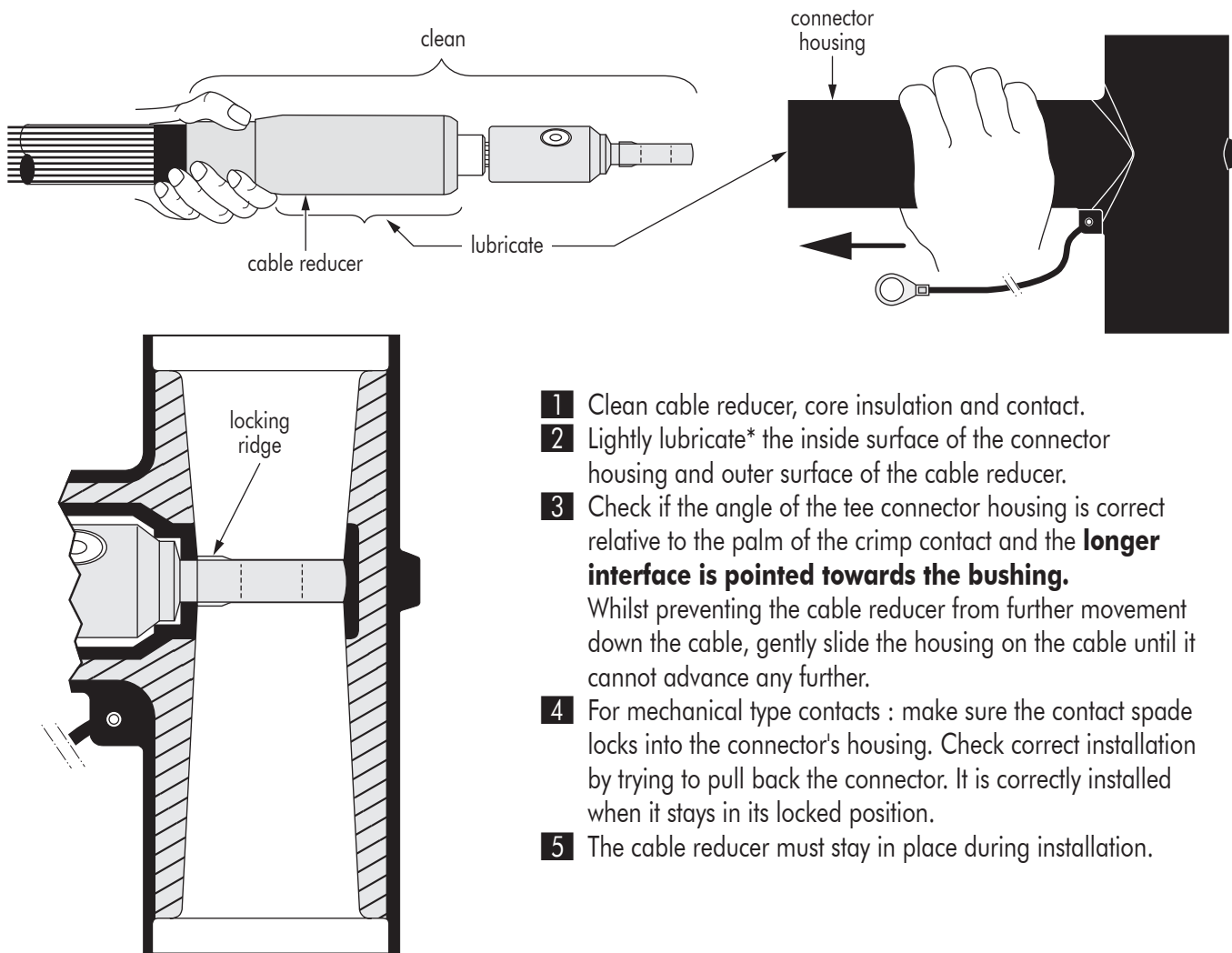
After tightening



- 7 After tightening, distance « Z » must be between **155** and **165** mm. If necessary, adjust the position of the cable reducer until distance « Z » is within the tolerance range.
- 8 Wipe-off excess inhibitor and remove any burrs resulting from tightening.

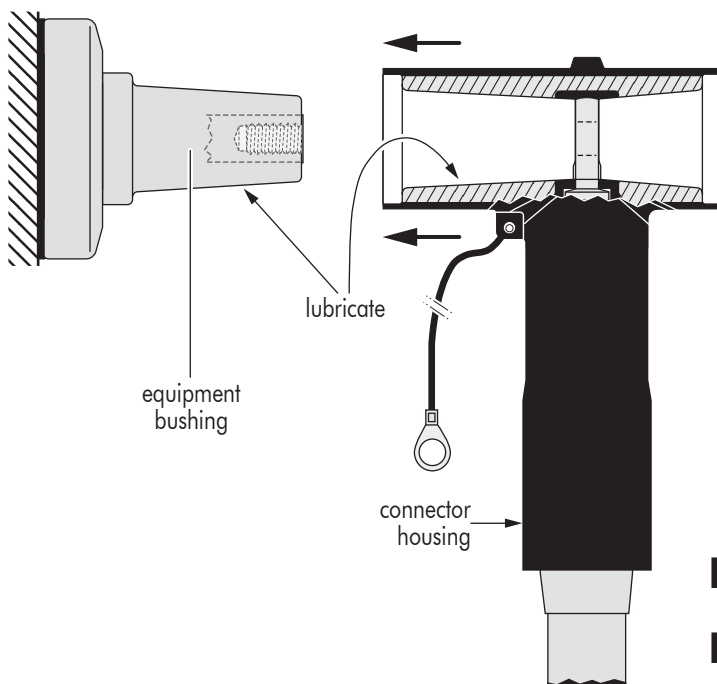
FOR INFORMATION ONLY Please always use the instructions supplied in the kit

## CONNECTOR INSTALLATION ON CABLE



- 1 Clean cable reducer, core insulation and contact.
- 2 Lightly lubricate\* the inside surface of the connector housing and outer surface of the cable reducer.
- 3 Check if the angle of the tee connector housing is correct relative to the palm of the crimp contact and the **longer interface is pointed towards the bushing**.  
Whilst preventing the cable reducer from further movement down the cable, gently slide the housing on the cable until it cannot advance any further.
- 4 For mechanical type contacts : make sure the contact spade locks into the connector's housing. Check correct installation by trying to pull back the connector. It is correctly installed when it stays in its locked position.
- 5 The cable reducer must stay in place during installation.

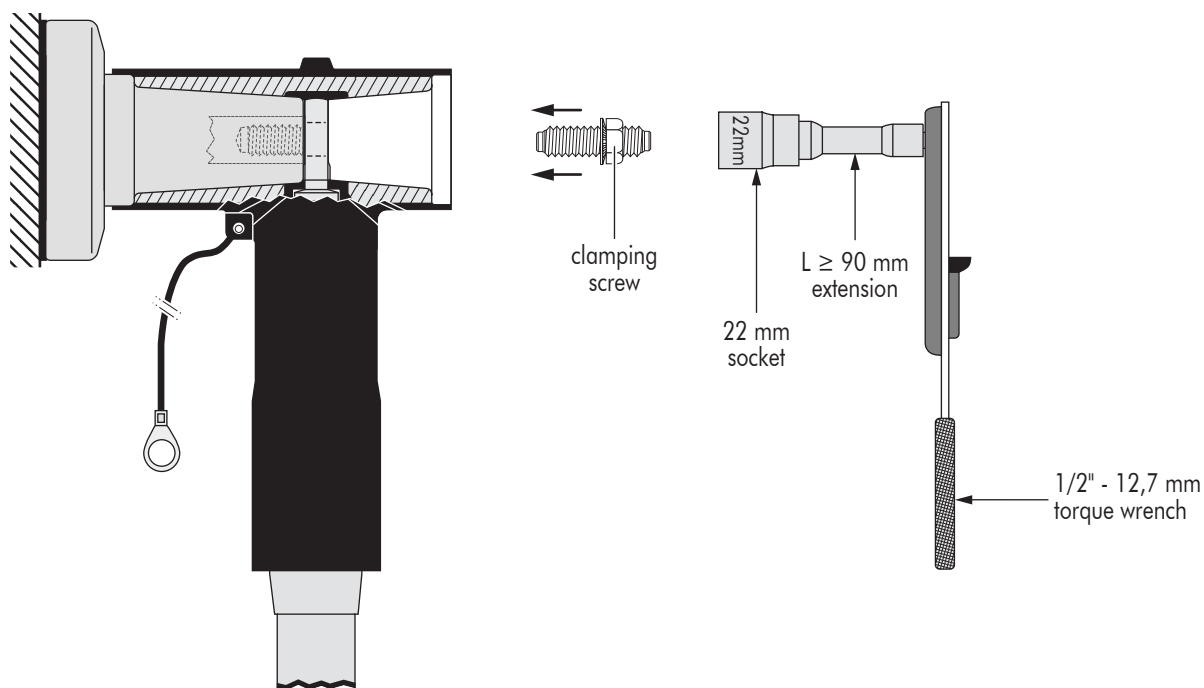
## CONNECTOR INSTALLATION ON BUSHING



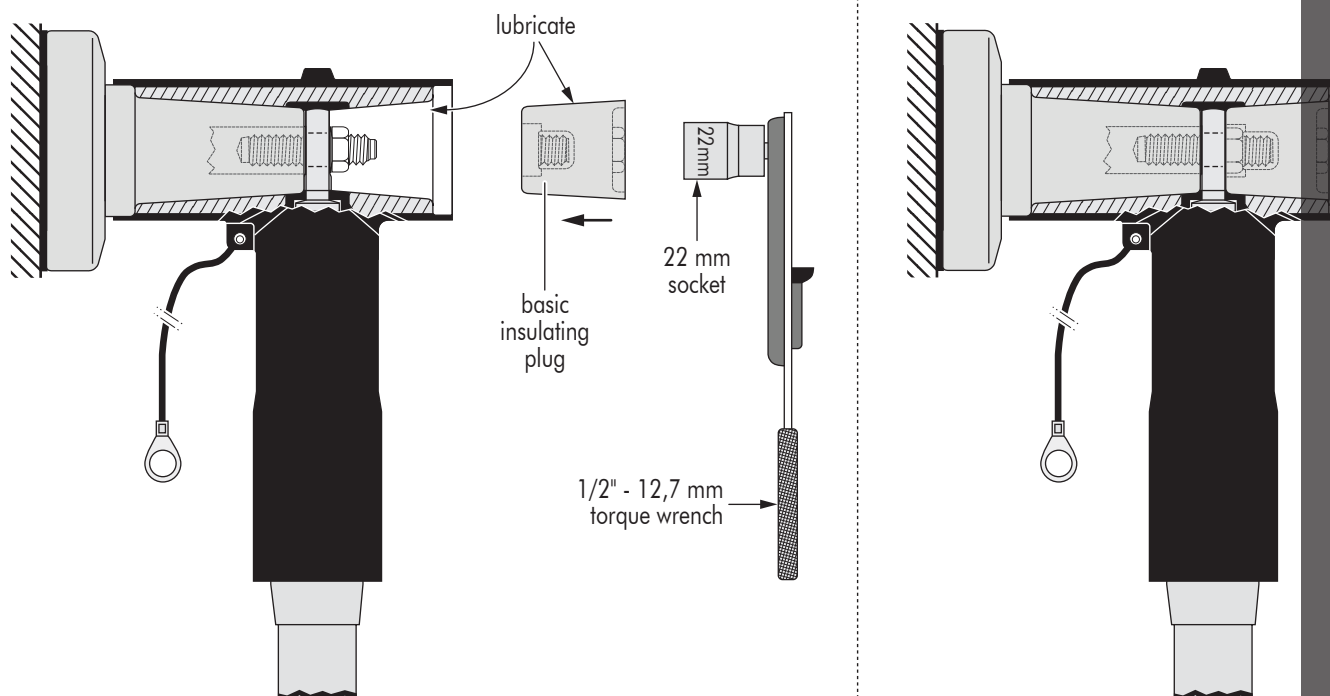
- 1 Clean and lightly lubricate\* both connector and bushing interface.
- 2 Push connector on to the bushing.

FOR INFORMATION ONLY Please always use the instructions supplied in the kit





- 3 Insert clamping screw into the threaded hole of the bushing.
- 4 Use torque wrench with a socket wrench 22 and tighten exerting 50 Nm (5 kgm or 36,9 foot-pounds) of torque.  
**In order to achieve the correct applied torque ensure that there is no lubricant on the threaded parts.**



- 5 Clean and lubricate\* the insulating plug for the opposite side of the connector.
- 6 Insert the plug in the connector and tighten assembly : use torque wrench with socket of 22 and tighten exerting 30 Nm (3 kgm or 22,1 foot-pounds) of torque.  
**In order to achieve the correct applied torque ensure that there is no lubricant on the threaded parts.**

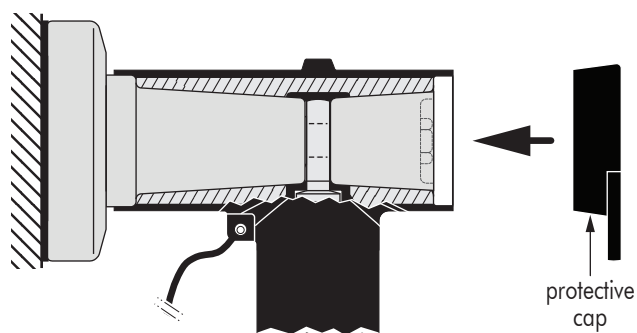
\* USE ONLY THE SILICONE LUBRICANT SUPPLIED



FOR INFORMATION ONLY Please always use the instructions supplied in the kit

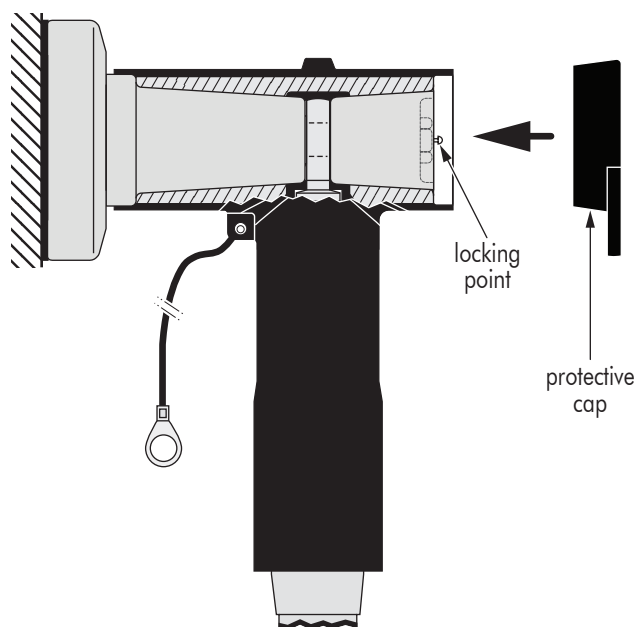


## INSTALLATION OF THE CAP



### A. Installation on insulating plug BIPR without voltage detection point (for applications up to 24 kV only) :

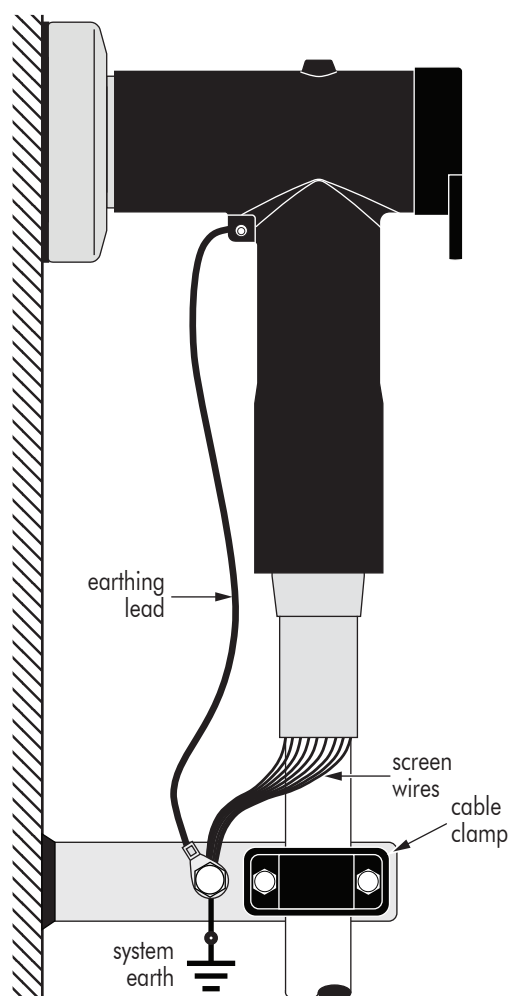
Clean inside of the cap and outside surface of connector and insulating plug. Push cap over the connector and on to the insulating plug. Slightly pull up the edge of the cap to exhaust the air during assembly. Position the cap with the pulling tab pointing downwards.



### B. Installation on insulating plug BIPA with voltage detection point (for applications up to 36 kV) :

Clean inside of the cap and outside surface of connector and insulating plug. Push cap over the connector and on to the insulating plug. Slightly pull up the edge of the cap to exhaust the air during assembly and while pressing the centre of the cap on to the locking point until it snaps in place. Position the cap with the pulling tab pointing downwards.

## CONNECTOR EARTHING AND CABLE CLAMPING



- 1 Bend back the screen wires along the outer sheath to form a pig tail.
- 2 Connect the earthing lead and screen wires to the system earth.

### NOTE :

**A connector/bushing mated combination should not be allowed to carry the full weight of the cable.**

**Therefore clamp the cable as close as possible to the connector.**

### IMPORTANT NOTES :

- **Never disconnect the connector from energised equipment nor energise a disconnected connector without previously installing on its appropriate corresponding mating part.**
- **Do not allow hydrocarbon oils or solvents to contaminate the E.P.D.M. rubber.**  
**In the event of contamination, wipe the surface clean with a dry cloth.**

**Euromold**  
a Nexans company

**Nexans Network Solutions NV - div. EUROMOLD**

Zuid III - Industrielaan 12  
B-9320 EREMBODEGEM-AALST – BELGIUM  
Tel: +32 (0)53/85 02 11 – Telefax: +32 (0)53/83 10 13  
sales.euromold@nexans.com

FOR INFORMATION ONLY Please always use the instructions supplied in the kit



IS90722-ENG - 430TB/G-45 - Revision 1