

**INSTALLATION INSTRUCTIONS FOR
HEATSHRINK TERMINATIONS FOR USE ON
6.35/11kV THREE CORE PAPER INSULATED BELTED OR
SCREENED CABLES WITH LEAD SHEATHS (PILC)
OR ALUMINIUM SHEATH (PICAS)
FOR INDOOR USE.**

SERIES: HIT-3P-11

Kit No.	Conductor Cross section mm²
HIT-3P-A-11	16-25
HIT-3P-B-11	35-70
HIT-3P-C-11	95-240
HIT-3P-D-11	300-400

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3	NOV 2006	5226	MH	Aaron Buscombe

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General Instructions:**VERY IMPORTANT - PLEASE READ BEFORE STARTING THE INSTALLATION.**

Before shrinking one tube onto another or onto polymeric insulation or before applying any mastic, clean and degrease the underlying surfaces. Where any of these surfaces are semi conducting or stress controlling take care not to drag any carbon particles onto any insulating components. Metal sheaths/armours of cables should always be scraped / abraded and degreased before applying any earth bonds or mastics.

When using heatshrink tubing;

- Use a propane (preferred) or butane gas torch.
- Use torch in a well-ventilated area.
- obtain soft blue flame with yellow tip. Pencil blue flames should not be used.
- Aim torch in direction of heatshrink to preheat material.
- Continuously move flame to avoid scorching.
- Any cut tubing should be smooth with no jagged edges.
- Recovered tubing should be smooth, wrinkle free with inner components defined.

NOTES ON FITTING OF TERMINATION'S.

Remember to fit any gland or non-splitable gland plates over the cable before starting the termination.

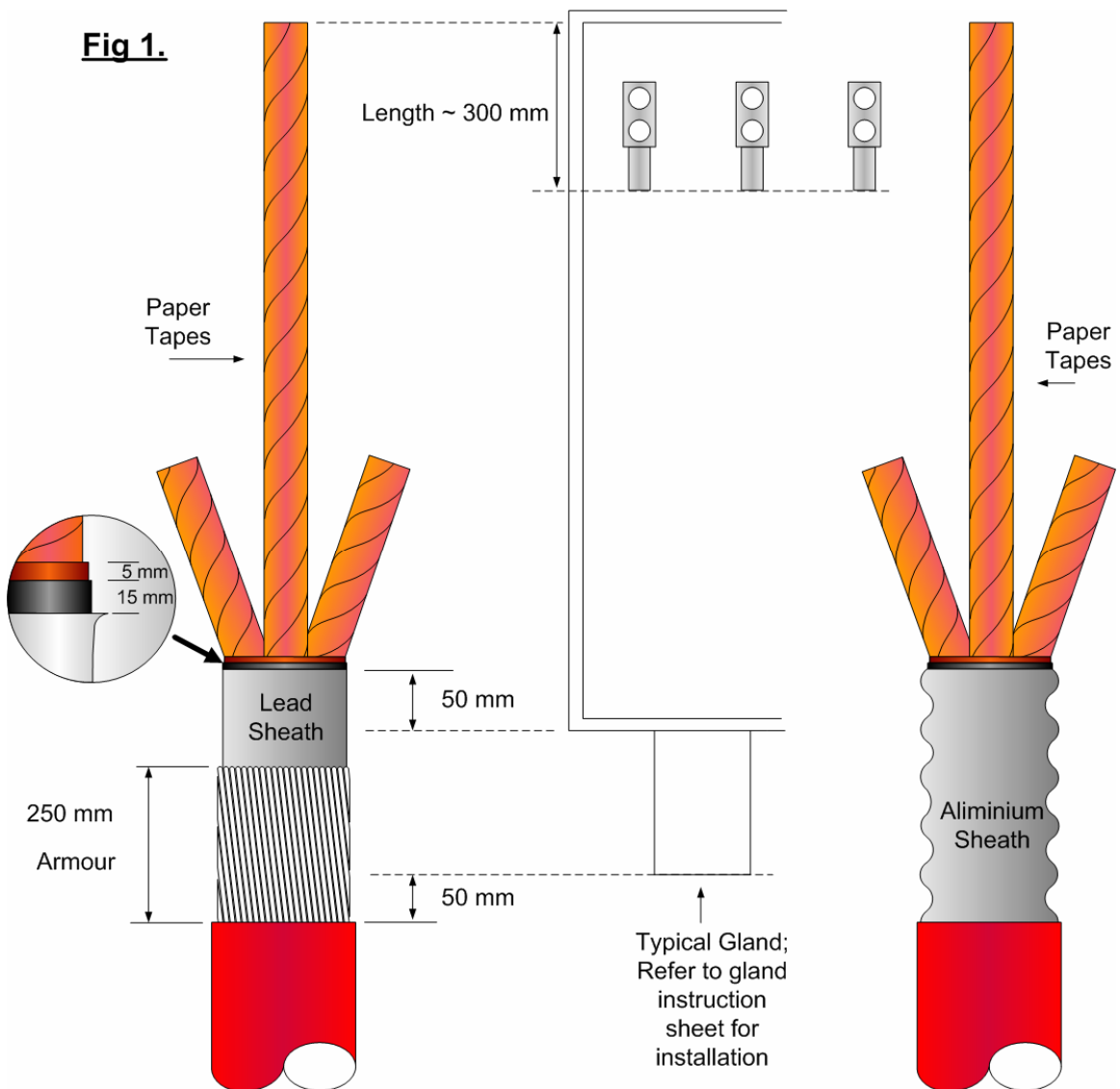
If possible lower the gland plate to ease installation.

The terminations have been designed for use in a cable box with a minimum of 400 mm from the centre line of the bushing to the base of the cable box.

1. Check gland and box dimensions against drawing before stripping as dimensions may vary.
2. Remove cable outsheath as shown.
3. For PILC cables, Remove armour wires to dimensions shown.
4. Remove the lead (PILC) or aluminium (PICAS) sheath as shown and clean thoroughly.

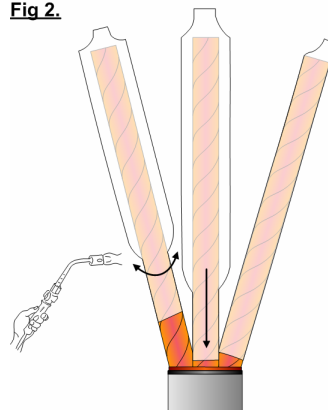
Note: Length of exposed metallic sheath is dependent on gland used. Figures used in diagram are nominal length.

5. Remove belt and carbon papers to position shown, and hold in place with PTFE tape or similar. Do not use PVC tape.
6. Remove filler papers between cores and retain for lubricating components later.



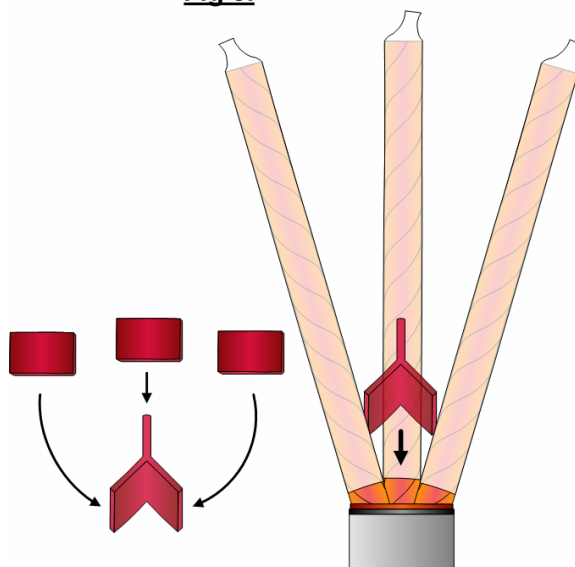
7. Slide the clear thin wall tubes over the cores to about 100 mm from the crutch. Gently shrink the tubes for the first 75 mm. allow to cool, then carefully twist the tubes in the direction of the papers and slide down into crutch. Finish shrinking along length. (Fig. 2).

Fig 2.



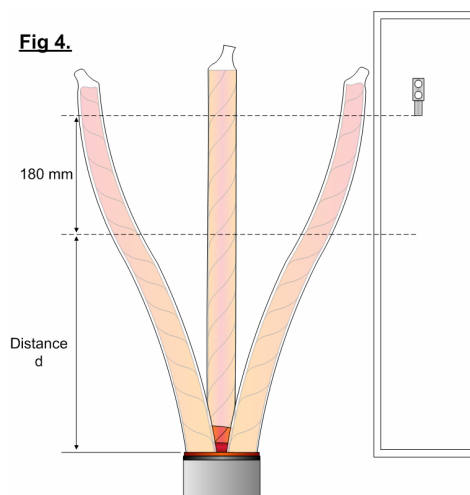
8. Using approximately 400 mm of brown mastic, form a star shape. Lightly smear the star shaped sealant with grease from the cable fillers.
9. Open cores slightly and push the star fully into crutch, wrap excess around cores and onto the metal sheath. (Fig. 3).

Fig 3.



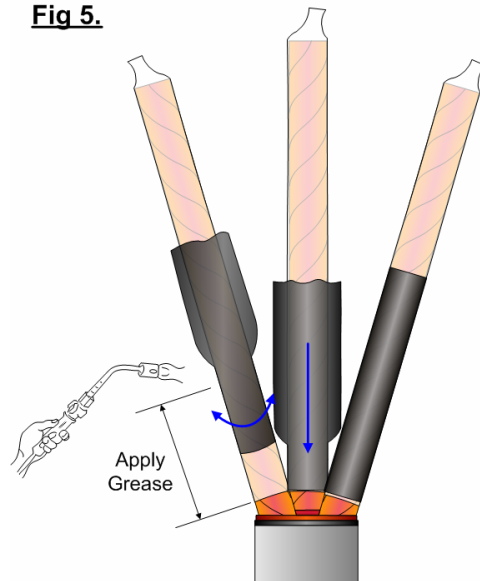
10. Position the cable next to the box – crossing cores if needed – and mark each core 180 mm from the bottom of the lug. (Fig. 4).
11. Cut conductive tube to distance d, by placing against end of belt papers at one end and cutting where the cores are marked.

Fig 4.



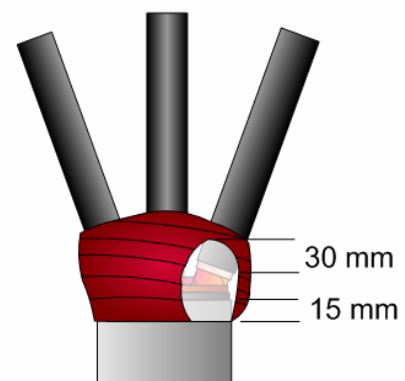
12. Apply grease from the cable fillers to the cores where conductive sleeves are to be fitted.
13. Partially shrink the conductive tubes as with the clear tube, and then slide into crutch and finish shrinking. (Fig. 5).

Fig 5.



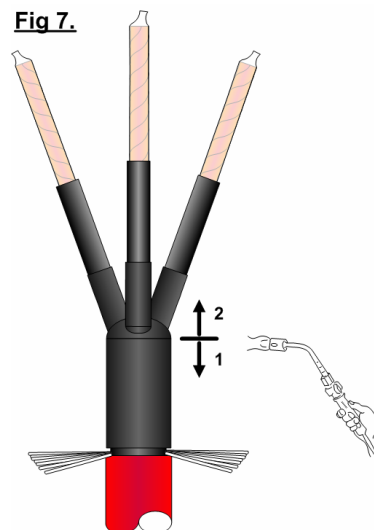
14. Use a maximum of 2 strips of brown mastic as shown in Fig. 6 to form a smooth profile over the metal sheath and cores. Ensure step at end of sheath is completely filled and that the breakout boot will fit over the mastic.

Fig 6.



15. Position breakout boot over the cores; Ensure that the breakout is seated well down into the crutch.
16. Using a soft yellow flame shrink from centre, working downwards (1), then and work upwards towards fingers (2). (Fig 7).

Fig 7.



At this point it is recommended that the gland is fitted, but not connected to the armours; take care not to cause damage the termination when sliding the gland in position. Refer to the gland installation instructions to fully install the gland.

Fig 8.

17. Using approximately 50mm of brown mastic, apply over the step at the end of the conductive tubing to ensure it is completely eliminated and a smooth overall profile is obtained as shown in fig. 8. Stretch the tape to 30% of its original width and apply 20mm onto the thin wall tubing and 10mm onto the conductive tubing.
18. Mark 10 mm below the end of the mastic to indicate position of stress control tubing.

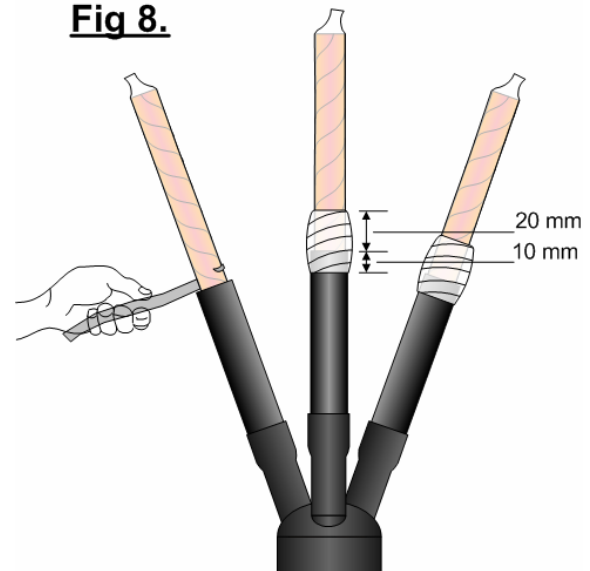
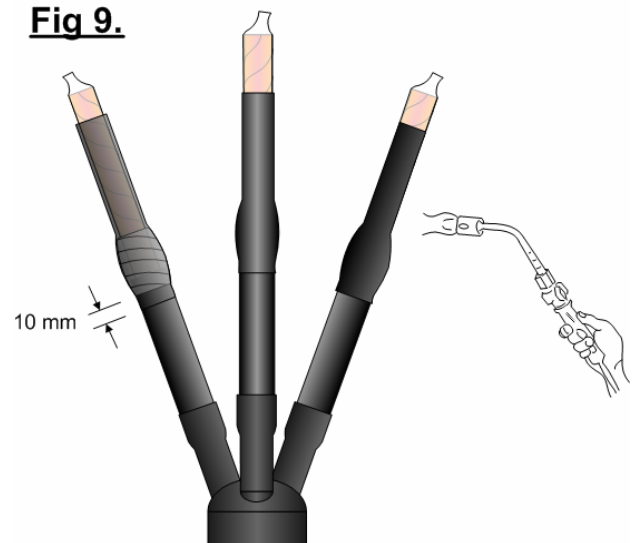


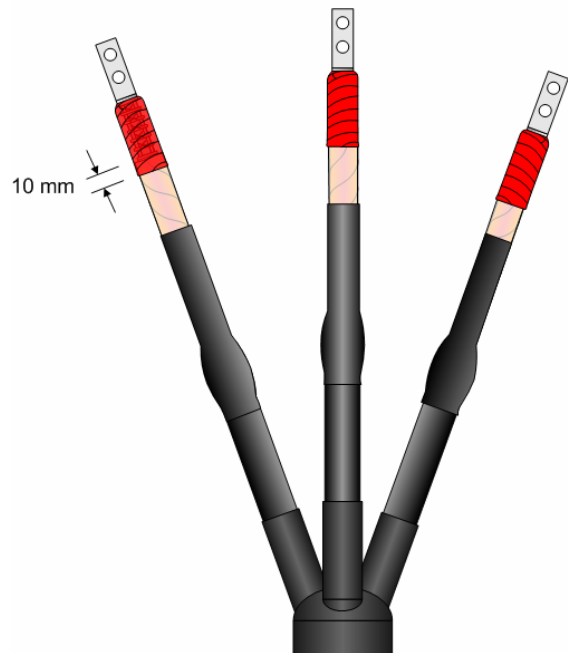
Fig 9.

19. Slide the stress control tube down to the marker and shrink in place. (Fig. 9).



20. Offer the partly installed termination to the cable box; cut cores to length, taking note of any core crossing that may be required. Remove the paper insulation for the depth of the lug + 5 mm and fit the lug as per manufactures instructions.
21. Wrap red mastic over lug barrels and onto cores as shown in fig. 10.

Fig 10.



22. Fit outer red anti-track tubes over the legs of the breakout and shrink down. (Fig. 11).
23. Cut the tube so that it fits just onto the palm of the lug. Make sure that the tubes do not prevent good contact with the bushing.

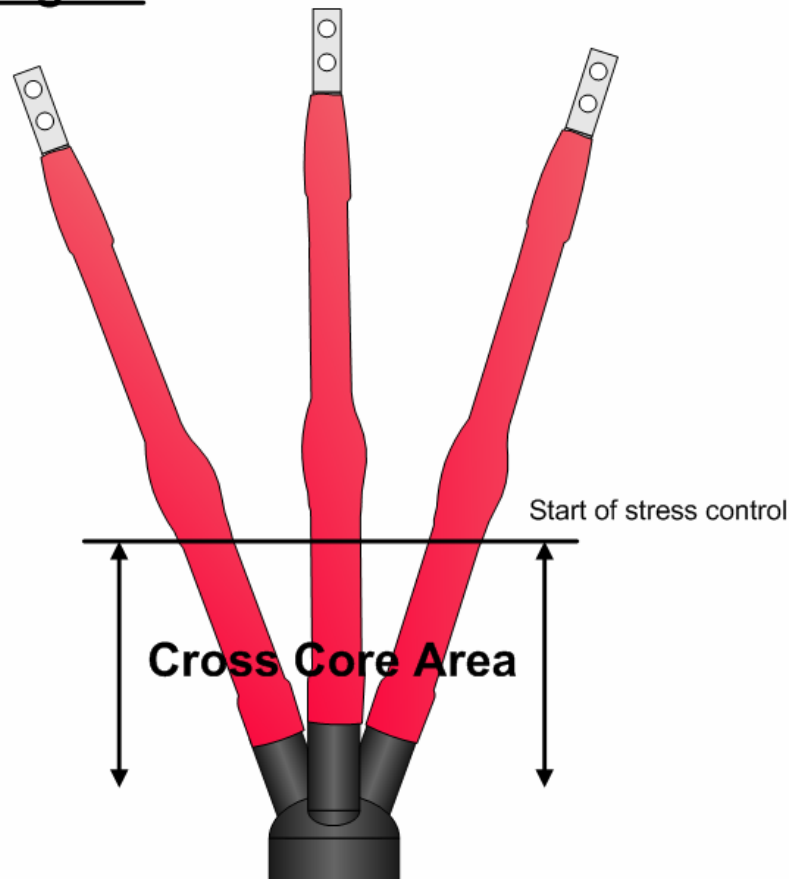
Fig 11.



Core Crossing

24. Cores can be crossed at any point between cable breakout and start of stress control. (Fig. 12)

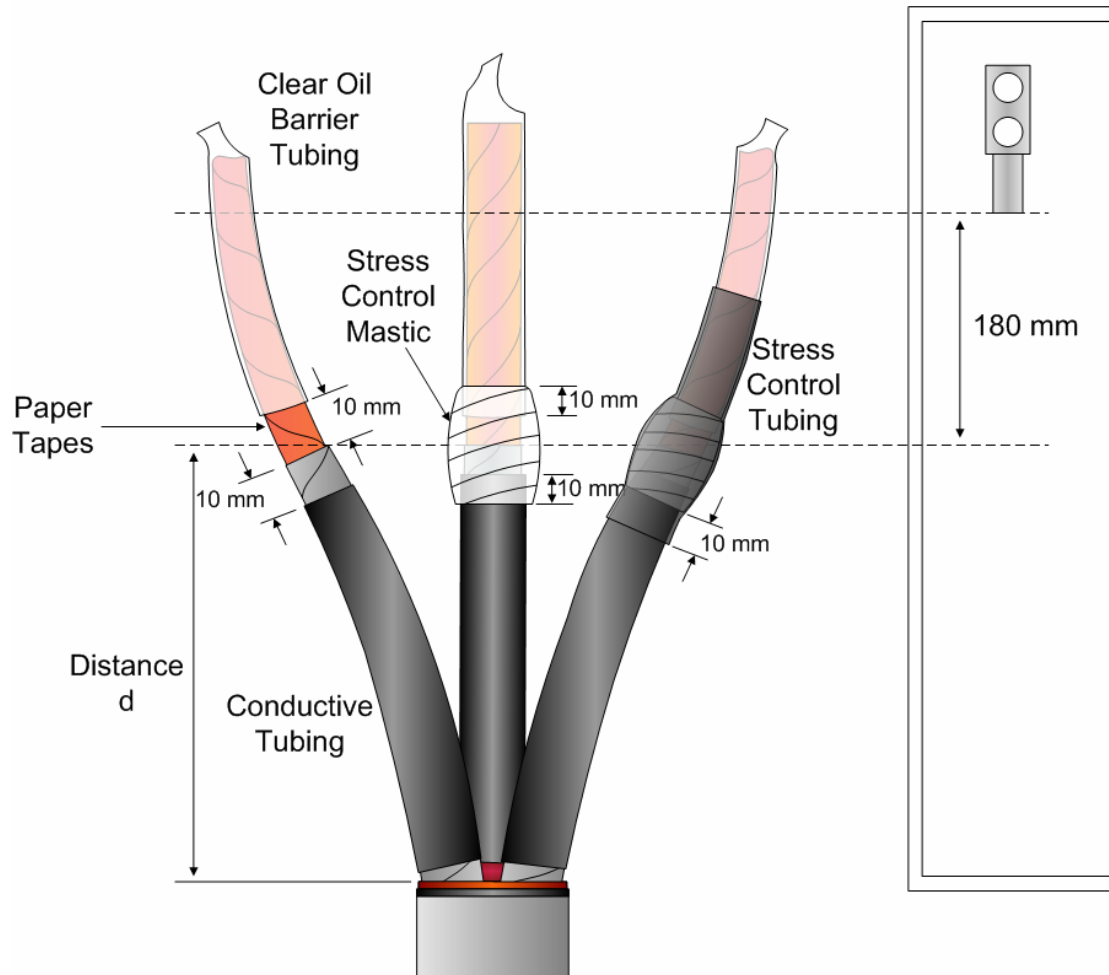
Fig 12.



Completed termination

25. The gland plate assembly should now be completed following the manufacture's instructions. The terminations should be allowed to cool before moving or energising.

Arrangement for Screened Paper Cables



When terminating a screened paper cable, the arrangement above should be followed using the steps as detailed in the main instruction.

Important Notice To Users

DISCLAIMER

1. The information contained in these installation instructions is intended to describe the correct method of installing cable accessories under normal conditions. Prysmian has no control over site conditions that may affect installation, and it is the responsibility of the installer to ensure the site is suitable.
2. Installation must always be carried out by a properly trained competent person.
3. Prysmian's liability in respect of all products supplied by it are set out in its Conditions of Sale, a copy of which is available on request.