

17.5/24kV 630A IEC Front / Coupling (Rear) T-Body Connector Installation Instructions

DANGER & IMPORTANT:

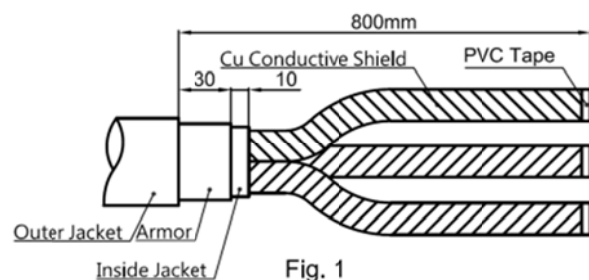
1. All apparatus must be de-energized during installation or removal of part(s). All deadbreak connectors must be de-energized before operating. The connectors are rated for use on 8.7/15(17.5)kV or 12/20(24)kV class systems.
2. All apparatus must be installed and operated in accordance with individual user, local, and national work rules. These instructions do not attempt to provide for every possible contingency.
3. Read entire installation instructions before starting. Have all required tools at hand and maintain cleanliness throughout the procedure.
4. Check contents of package to ensure they are complete and undamaged. Check all components to ensure proper fit with cable and/or mating products.

Required tools: Cable stripping tool, Compression tool, Monkey spanner, Deep socket wrench

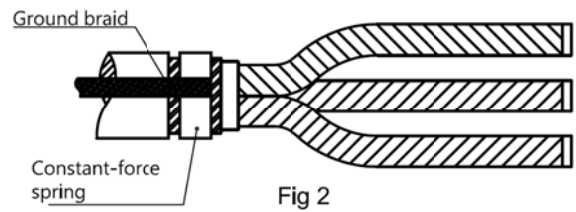
Adapter Selected Information			
Adapter Size	Cable Insulation Dimension (mm)	10kV XLPE Cable - GB (mm ²)	20kV XLPE Cable - GB (mm ²)
A	15.5 – 19.0	35	-
		50	-
B	18.0 – 23.0	70	35
		95	50
			70
C	22.0 – 27.0	120	95
		150	120
		185	150
D	28.0 – 32.0	240	185
		300	240
E	31.0 – 37.0	400	300
			400

IEC Front T-body Instructions: (One core cable, start to Step 6)

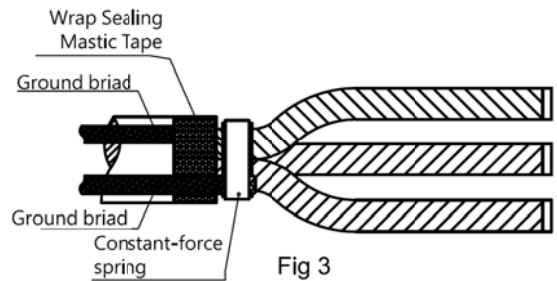
Step 1. Fixed 3 core cable, remove the outer jacket (800mm) and prepare cable to armor 30mm and inside jacket 10mm as Fig.1. Use PVC tape to fix Cu conductive shield of 3 phase cable.



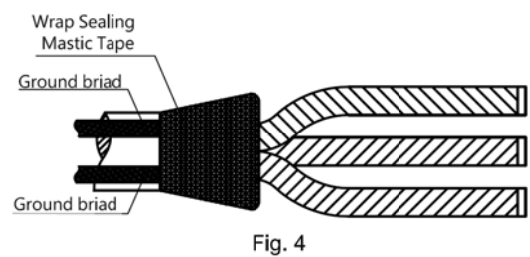
Step 2. Clean outer jacket and armor from 100mm to the end of armor. Use constant-force spring to fix ground braid into armor as Fig. 2.



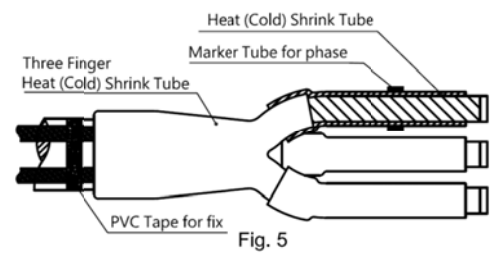
Step 3. Wrap sealing mastic tape to cover constant-force spring and ground braid on armor. Wrap second ground braid in root of 3 phase cable and place on outer jacket. (Notice: Second ground braid should be placed different to first one) Use constant-force spring to fix second ground braid or weld it on root of 3 phase cable as Fig. 3.



Step 4. Use sealing mastic tape to wrap between root of 3 phase cable and end of outer jacket as Fig. 4. Sealing mastic tape needs to cover gap in root of 3 phase cable and ground braid on Cu conductive shield. Sealing mastic tape will be smooth taper after wrap as Fig. 4.



Step 5. Cover three finger heated (cold) shrink tube tight to root of 3 phase cable. Cover heated (cold) shrink tube tight to the end of three finger shrink tube. Heated shrink tube: Even heat heated shrink tube before it shrink completely. Cold shrink tube: Remove hold out tube, check cold shrink tube shrink completely. Use PVC tape to fix 2 ground braids on outer jacket as Fig. 5.



Step 6. Dimension between end of cable and equipment bushing is 40mm. Strip cable as follow and Fig. 6.

- 1) Strip heated (cold) shrink tube or outer jacket into 260mm from the end of cable. Strip Cu conductive shield into 220mm from the end of cable. No damage on semi-conductive shield.
- 2) Strip semi-conductive shield into 180mm from the end of cable. No damage on insulation.
- 3) Strip insulation into "L" (See Table 1) from the end of cable.
- 4) Bevel the end of insulation and semi-conductive shield 45 degree.

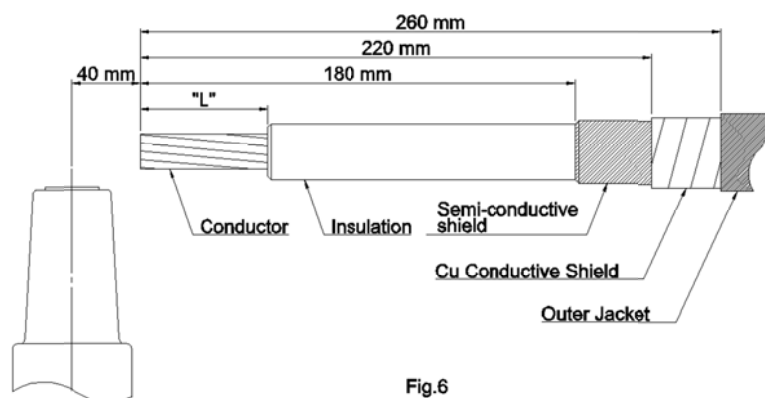


Table1

Conductor Size	L
25-150mm ²	60mm
185-400mm ²	75mm

Step 7. Wrap 2 layer semi-conductive tape 60mm from 270mm of the end of cable into outer jacket, Cu conductive shield and semi-conductive shield as Fig. 7.

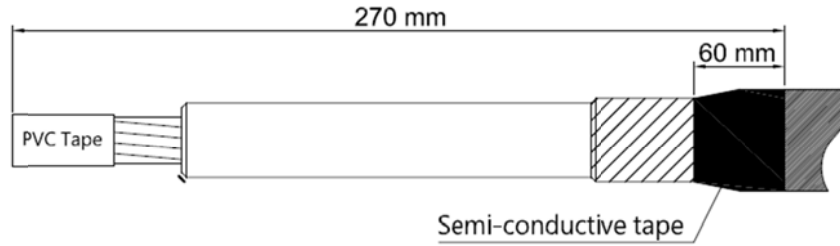


Fig. 7

Step 8. Wrap PVC tape to mark adapter install location in 200mm from the end of cable as Fig. 8. Wrap PVC tape on conductor. Grind insulation by sandpaper and thoroughly clean by clean paper.

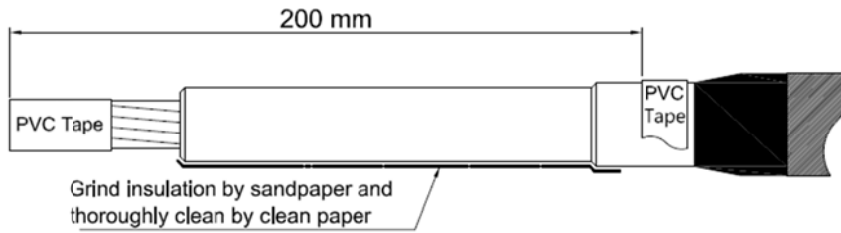


Fig. 8

Step 9. After cleaner evaporate, lubricate cable insulation and the inside surface of adapter by silicone lubricant. Slide adapter down the cable to marked PVC tape as Fig. 9. Remove marked PVC tape after finish install adapter.

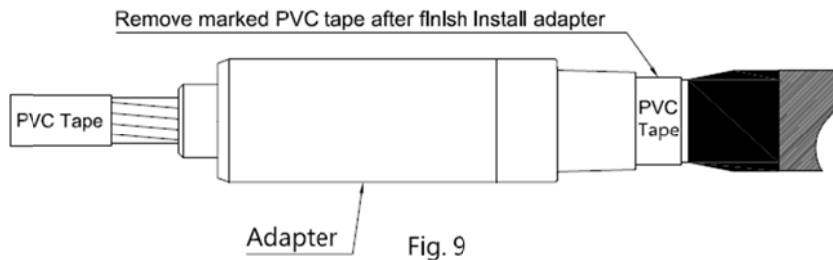


Fig. 9

Step 10. Wrap 2 layer sealing mastic tapes on 280mm from the end of cable (wide 100mm). Wrap 2 layer PVC tapes on sealing mastic tapes.

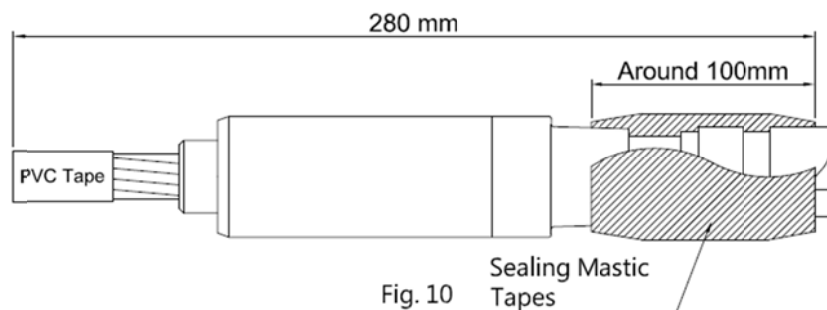


Fig. 10

Step 11. Remove PVC tape on conductor and clean conductor. Slide compression lug down the cable conductor. Ensure that each lug face is parallel to equipment bushing or lug connection interface. Crimp terminal lug according to manufacturer recommendations. Start at the upper end as Fig. 11. Each crimp needs to rotate 90 degree.

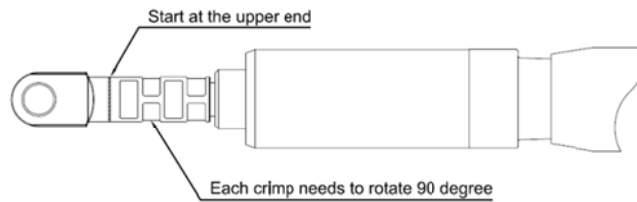


Fig. 11

Step 12. Clean the outer surface of adapter and the cable interface of front t-body by clean paper. After cleaner evaporate, lubricate the outer surface of adapter and the cable interface of front t-body by silicone lubricant. Slide front t-body down the adapter as Fig. 12.

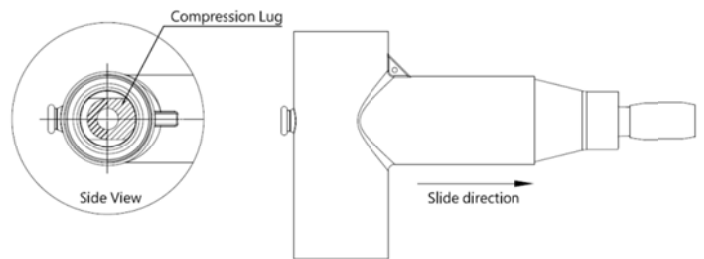


Fig. 12

Step 13. Use monkey spanner and tighten exerting stud into equipment bushing with 30Nm of torque. Clean equipment bushing and front t-body interface. After cleaner evaporate, lubricate by silicone lubricant. (See Fig. 13)

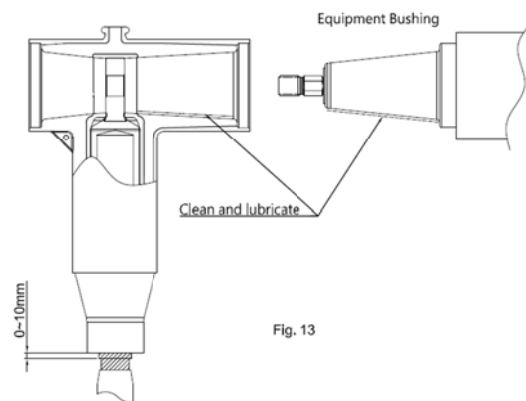


Fig. 13

Step 14. Slide front t-body down the equipment bushing as Fig.14.

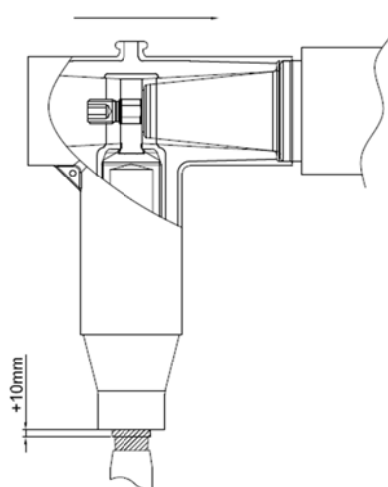
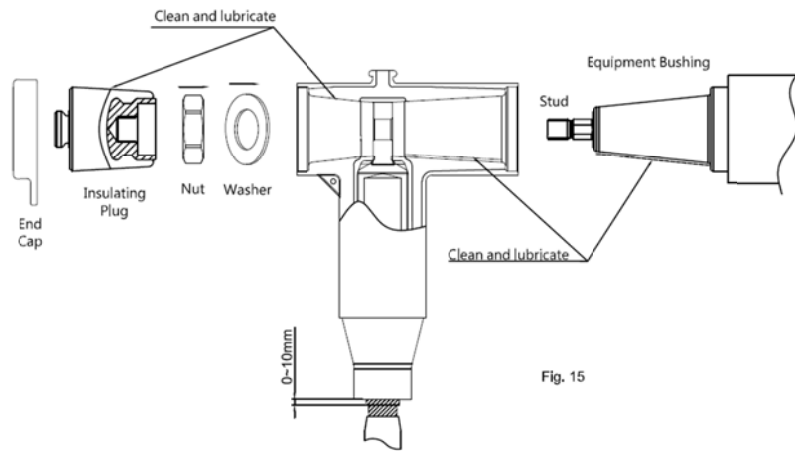


Fig. 14

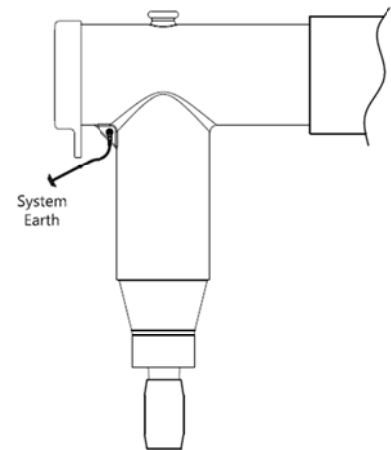
Installing check: After well installing, check dimension of the end of front t-body and adapter step. It should be 0~10mm. If it over, check installing dimension or reinstalling all parts.

Step 15. Put washer and nut into stud on equipment bushing. Use deep socket wrench and tighten exerting nut into stud with 50-55Nm of torque. Clean insulating plug and front t-body interface. After cleaner evaporate, lubricate by silicone lubricant. Slide insulating plug down the front t-body as Fig.15. Use socket wrench or monkey spanner and tighten exerting insulating plug with 35-40Nm of torque.



Step 16. Clean inside of end cap, push end cap over the front t-body and on to the insulating plug. Connect the grounding wire of front t-body to system earth as Fig.16.

Note: A front t-body/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 front t-body.



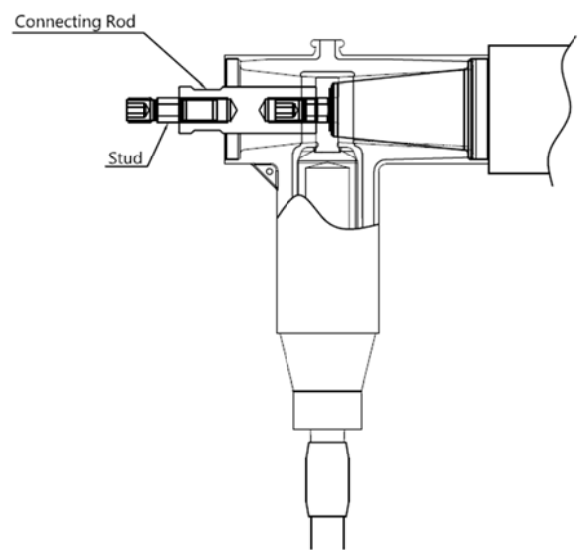
IEC Coupling (Rear) T-body Instructions:

Step 1. Before install coupling (rear) t-body, complete step 1 to step 14 of front t-body instructions. If front t-body was installed completely, remove insulating plug, nut and washer.

Step 2. Use monkey spanner and tighten exerting connecting rod into stud of equipment bushing with 50-55Nm of torque.

Step 3. Use monkey spanner and tighten exerting stud into connecting rod with 50-55Nm of torque.

Step 4. Before install coupling (rear) t-body, use monkey spanner and tighten exerting connecting rod again. Make sure of the thread connecting standard.



Step 5. Prepare front t-body by step 1 to step 11 of front t-body instructions. Clean the outer surface of adapter and the cable interface of coupling (rear) t-body by clean paper. After cleaner evaporate, lubricate the outer surface of adapter and the cable interface of front t-body by silicone lubricant. Slide coupling (rear) t-body down the adapter as Fig. 17.

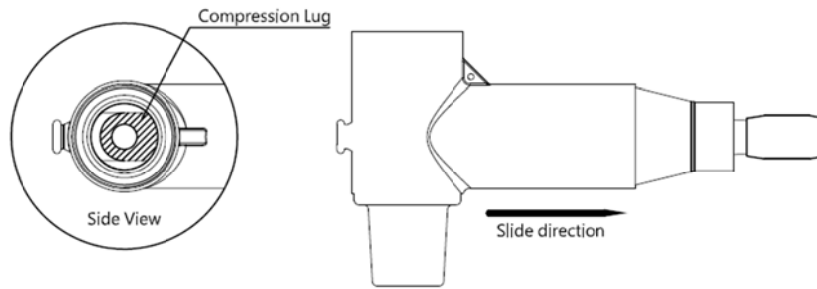


Fig. 18

Step 6. Clean coupling (rear) t-body and front t-body interface. After cleaner evaporate, lubricate by silicone lubricant. Slide coupling (rear) t-body down the front t-body.

Step 7. Put washer and nut into stud on connecting rod. Use deep socket wrench and tighten exerting nut into stud with 50-55Nm of torque.

Step 8. Clean insulating plug and coupling (rear) t-body interface. After cleaner evaporate, lubricate by silicone lubricant.

Step 9. Slide insulating plug down the coupling (rear) t-body. Use socket wrench or monkey spanner and tighten exerting insulating plug with 35-40Nm of torque.

Step 10. Clean inside of end cap, push end cap over the front t-body and on to the insulating plug.

Step 11. Connect the grounding wire of front t-body to system earth.

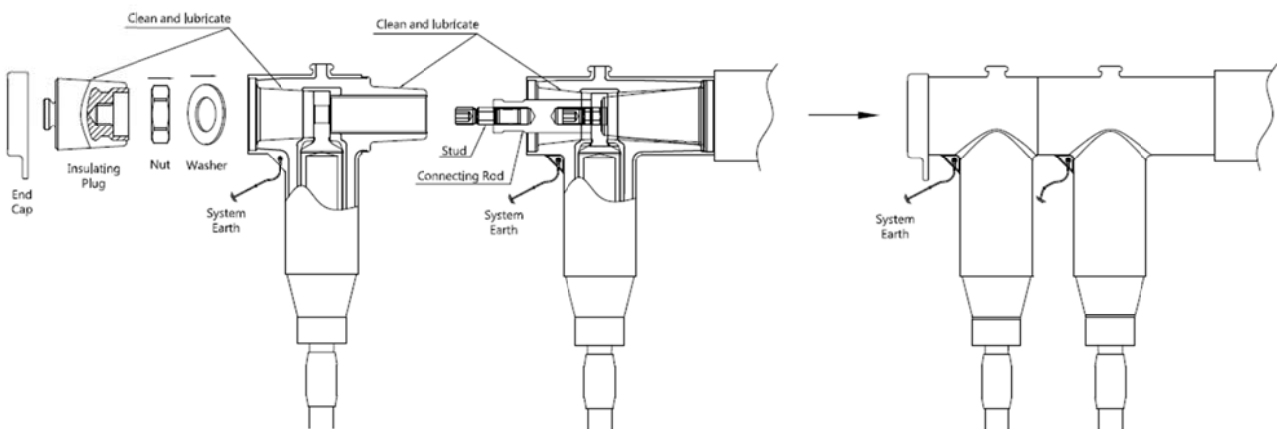


Fig. 19

Because these instructions do not attempt to provide for every possible contingency, contact us immediately if have any problems or questions during install connector.

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