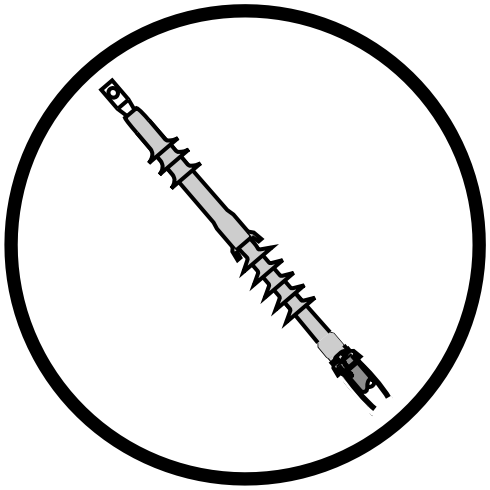
tyco Electronics

Raychem

Product Installation Instructions

TFT-350E-SLC

35kV Cold Applied Termination System for LC Shielded Power Cables



Energy Divison

Raychem
Tyco Electronics-Energy
8000 Purfoy Road
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PII-55088, Rev AC
PCN 519571-000
Effective Date: October 5, 2001

Kit Contents

1 Installation Instructions
2 Silicone housing on holdout
1 Stress control patch
1 Roll spring
2 Solder blocked ground braid
2 Adhesive backed copper tape
1 Cloth tape
1 Leakage current collector
Sealant tape strips
1 Cleaning kit

Suggested Installation Equipment (not supplied with kit)

- Cable preparation tools
- Tyco Electronics P63 cable preparation kit or cable manufacturer approved solvent
- Clean, lint-free cloths
- Non-conducting abrasive cloth, 120 grit or finer
- Electrician's tape
- Connector(s) and installation tools

Safety Instructions

Warning: When installing electrical power system accessories, failure to follow applicable personal safety requirements and written installation instructions could result in fire or explosion and serious or fatal injuries.

As Tyco Electronics has no control over field conditions which influence product installation, it is understood that the user must take this into account and apply his own experience and expertise when installing product.

Cleaning the Cable

Use an approved solvent, such as the one supplied in the P63 Cable Prep Kit, to clean the cable. Be sure to follow the manufacturer's instructions. Failure to follow these instructions could lead to product failure.

Some newer solvents do not evaporate quickly and need to be removed with a clean, lint-free cloth. Failure to do so could change the volume resistivity of the substrate or leave a residue on the surface.

Please follow the manufacturer's instructions carefully.

Installation Instructions

1. Select product.

Check kit selection with cable diameter dimensions in table 1 opposite.

Table 1

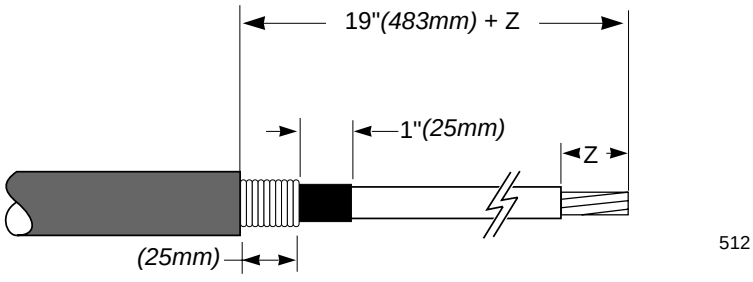
Kit	Nominal Conductor Size	Min/max Insulation ODs*
TFT-352E-SLC	1/0-250 kcmil	0.85-1.45"*(22-37mm)*
TFT-353E-SLC	4/0-500 kcmil	1.06-1.70"*(27-43mm)*
TFT-354E-SLC	500-1250 kcmil	1.49-2.20"*(38-56mm)*

*Insulation ODs and nominal conductor sizes are based on 100% compact and concentric stranded cable dimensions

2. Prepare cables.

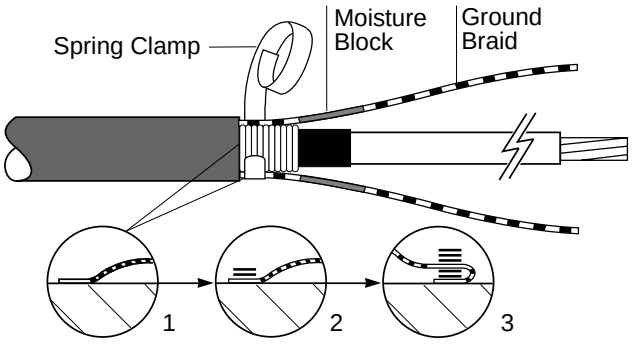
Prepare cables to the dimensions shown. When removing semi-con layer, be careful not to damage the cable insulation.

Remove the insulation to the dimension “Z” shown.



3. Install ground braid.

(1) Flare the moisture blocked ends of the ground braids and place them onto the LC shield butted up to the cable jacket. (2) Attach the braids to the shield by placing two wraps of the spring clamp over the braids. (3) Fold the braids back over the spring clamp wraps. Continue to wrap the remaining clamp over the braids. Tighten clamp by twisting it in the direction it is wrapped and secure with the copper foil tape provided.
Abrade and clean the surface of the primary insulation using an approved solvent. Be sure to remove any conductive particles or contamination.



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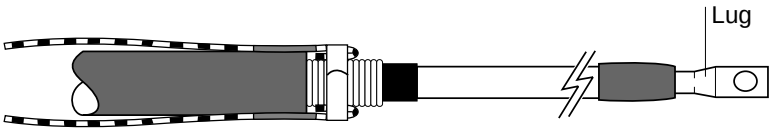
4. Make Lug Connection.

Crimp the connector using proper die and tool. Clean lug barrel of inhibitor and dirt and file off any sharp edges.



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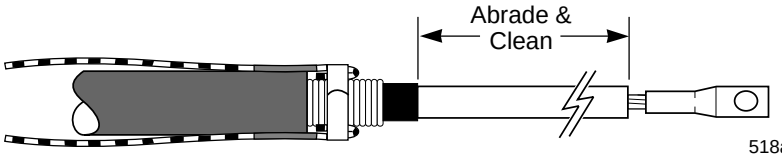
5. Abrade and clean insulation.

Abrade and clean the surface of the primary insulation using the solvent supplied with the termination or any other approved solvent. Be sure to remove any conductive particles or contamination.



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6. Install sealant.

Build up the lug barrel diameter to that of cable insulation using tape sealant, then overlap tape sealant 1/2" *(10mm)* onto insulation to provide a smooth profile.

Solvent clean and abrade jacket. Using light tension, wrap one layer of sealant onto the cable jacket as shown.

Press the solder-blocked portion of the braids into the sealant. Wrap an additional layer of sealant over the braid solder block.

To ensure the correct positioning of the termination, place a marker tape 4-1/4"*(108mm)* from the semicon cutback as shown.

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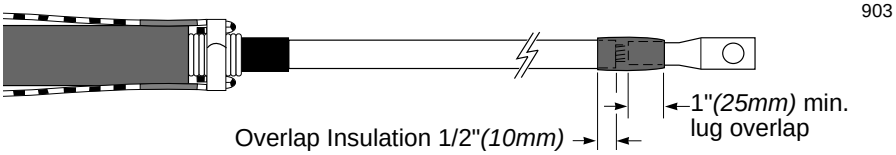

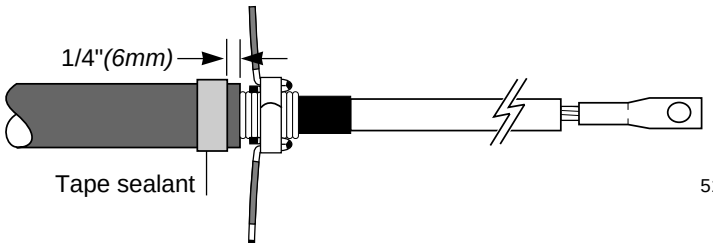

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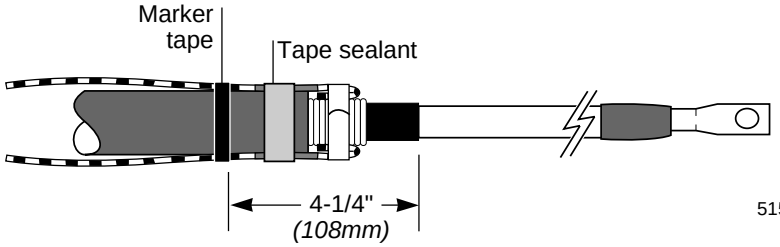

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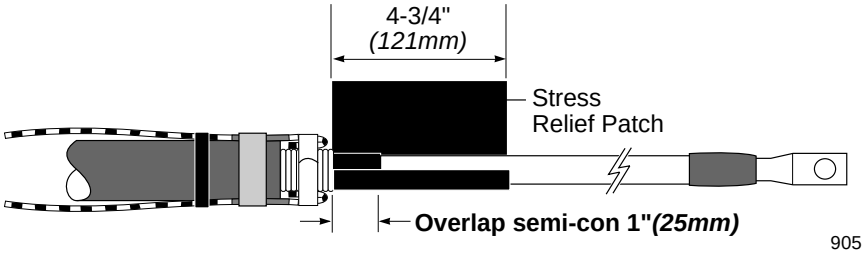
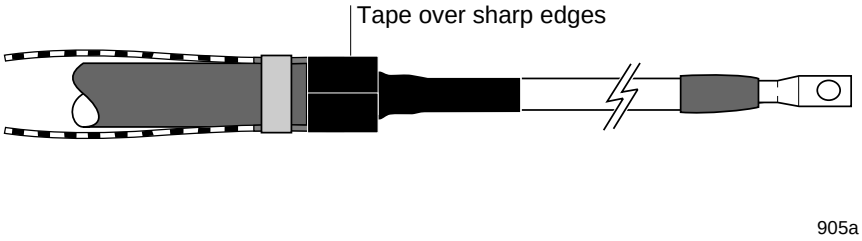
7. Apply Stress Patch.

Note: The stress patch easily sticks to itself and loose particles. Remove backing paper from the patch. Using light tension, wrap the entire patch around the semi-con oriented as shown. Avoid wrinkles and creases. Apply a thin smear of silicon grease over the surfaces of the cable insulation and stress relief patch.



8. Tape over sharp edges.

Using cloth tape provided, tape over all sharp edges of the ground clamp assembly and jacket cutback.

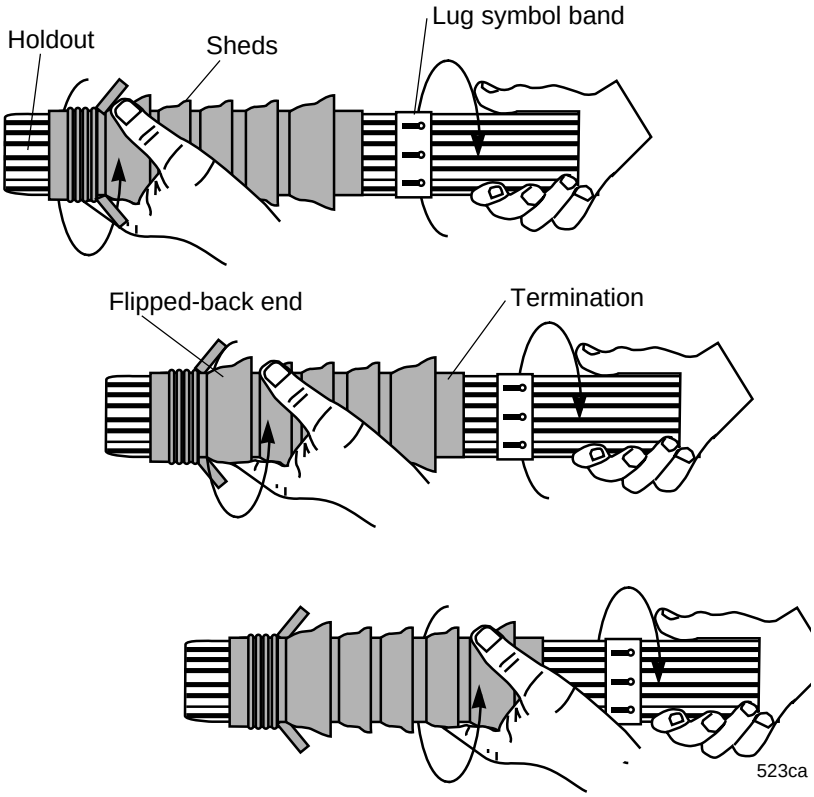


9. Loosening Termination.

This operation is vital to the simple installation of the product. Note that the sheds may be flipped backwards or forwards to ease the following operation and therefore may look different to that shown in the drawing. The orientation of the sheds is not important prior to fitting as they automatically align themselves after installation. There are two terminations in this kit (one with three sheds, the other with five). Loosen both in the manner shown opposite. Install the five-shedded termination first.

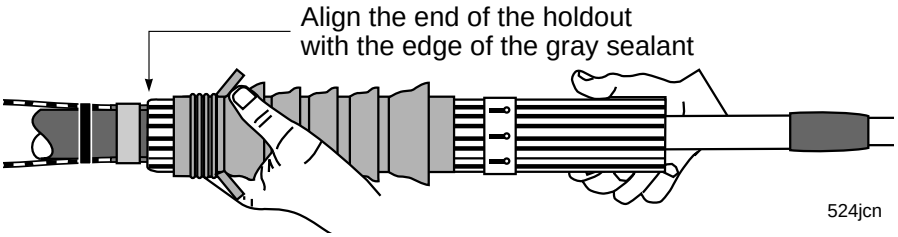
Hold the termination in one hand and the holdout in the other. Gripping firmly, twist the termination and holdout in opposite directions. Repeat twisting the termination and holdout, moving the hand in short increments up the termination until the entire termination is felt to move on the holdout.

Take care not to slide the termination off the end of the holdout.

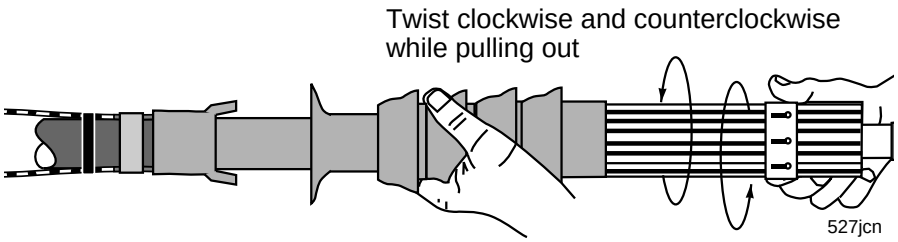


10. Installing the termination.

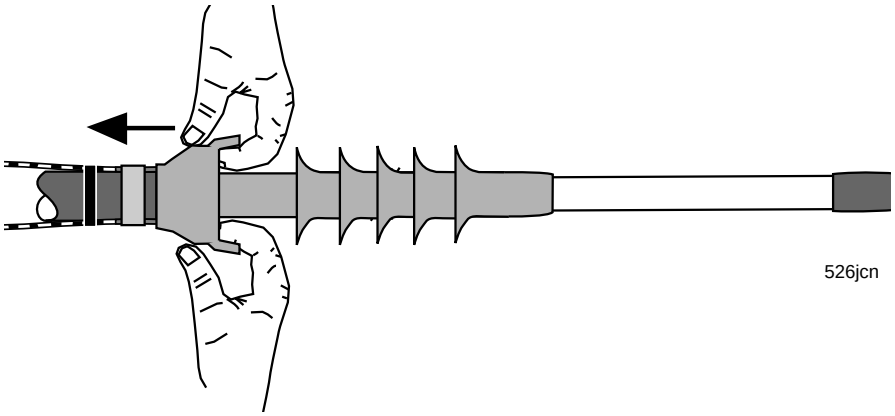
Install the five-shedded termination first. Position the holdout over the cable until it meets the jacket cutback. Twist the termination and slowly push it to the end of the holdout.



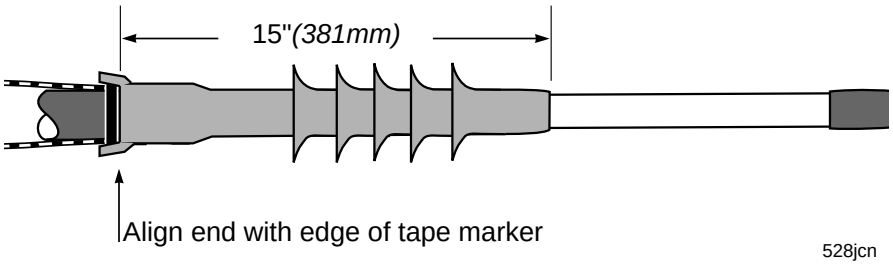
Slide the termination completely off the holdout using a twisting and pulling motion as shown.



Using the pull tabs, pull the flip-back portion away from the main termination, at the same time working the first two fingers of each hand between the flip-back and main termination. Pull the stretched out flip-back over the cable jacket and sealant.

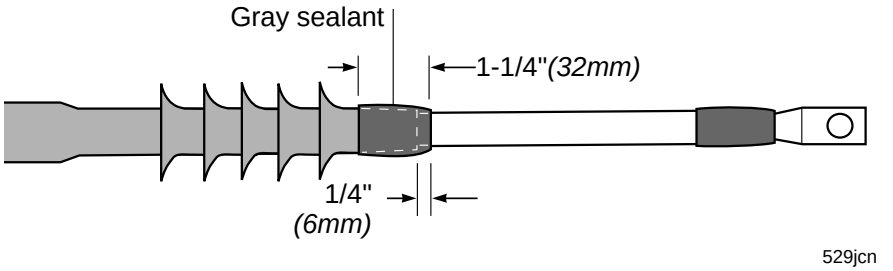


After installation, gently slide the termination so that the end aligns with the edge of the marker tape installed in step 6. Make sure the termination length is in accordance with the dimensions shown.



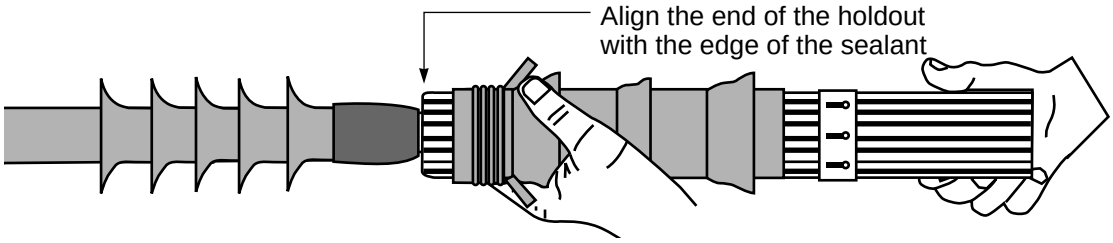
Having positioned the termination, now wrap one layer of tape sealant over the end of the termination and 1/4"*(6mm)* onto the cable insulation as shown.

Remove tape marker.



10. Installing the termination (continued).

Slide the three-shedded termination over the cable until it meets the leading edge of the sealant strip as shown. Twist the termination and slowly push it to the end of the holdout.



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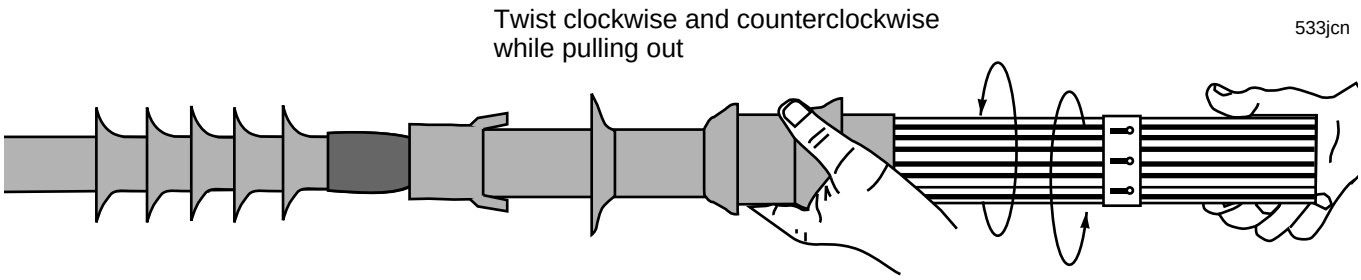
Slide the termination completely off the holdout using a twisting and pulling motion as shown.



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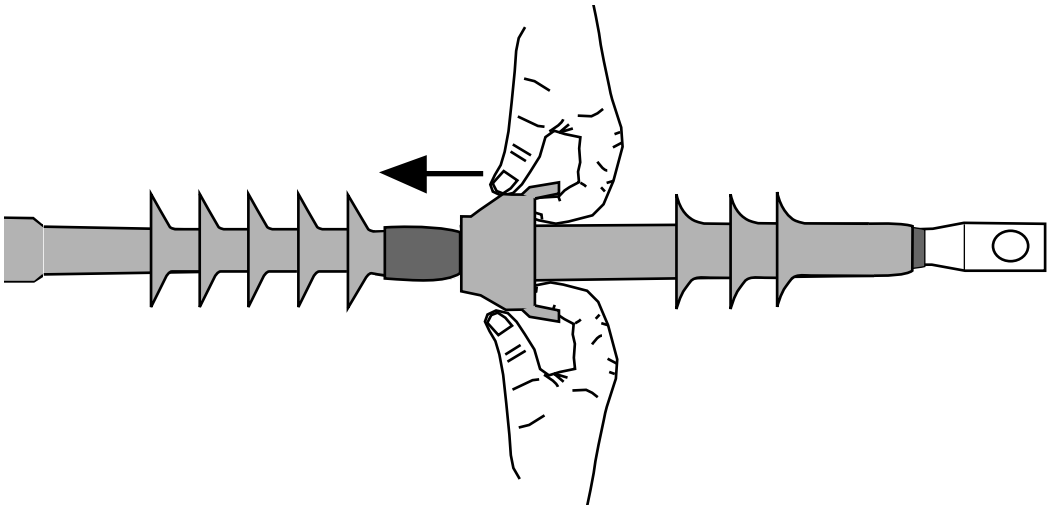
Using the pull tabs, pull the flip-back portion away from the main termination, at the same time working the first two fingers of each hand between the flip-back and main termination. Pull the stretched out flip-back over the sealant.



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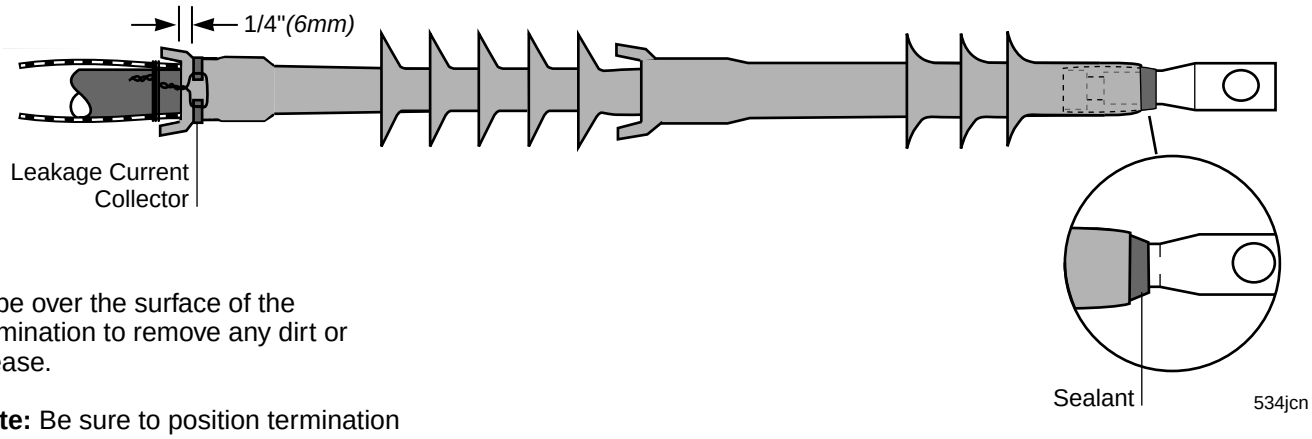
11. Complete installation

If necessary, adjust the three-shedded termination to overlap the sealant on the lug barrel (see drawing below). Place the leakage current collector 1/4”*(6mm)* from the end of the termination as shown. Use a copper wire to connect the current collector to the ground braid.



Wipe over the surface of the termination to remove any dirt or grease.

Note: Be sure to position termination at lug end so that there is a bead of sealant exposed as shown.

This completes the installation.