

3M™ Cold Shrink QT-III Silicone Rubber Skirted Termination Kit with Top Insulator and High-K Stress Relief

for Jacketed Concentric Neutral (JCN) Cable and Concentric Neutral (CN) Cable

7652-S-4-TI, 7652-S-4-TI(L) 7653-S-4-TI, 7654-S-4-TI, 7655-S-4-TI, 7655-S-4-TI(L) 7656-S-4-TI

Instructions

IEEE Std. No. 48

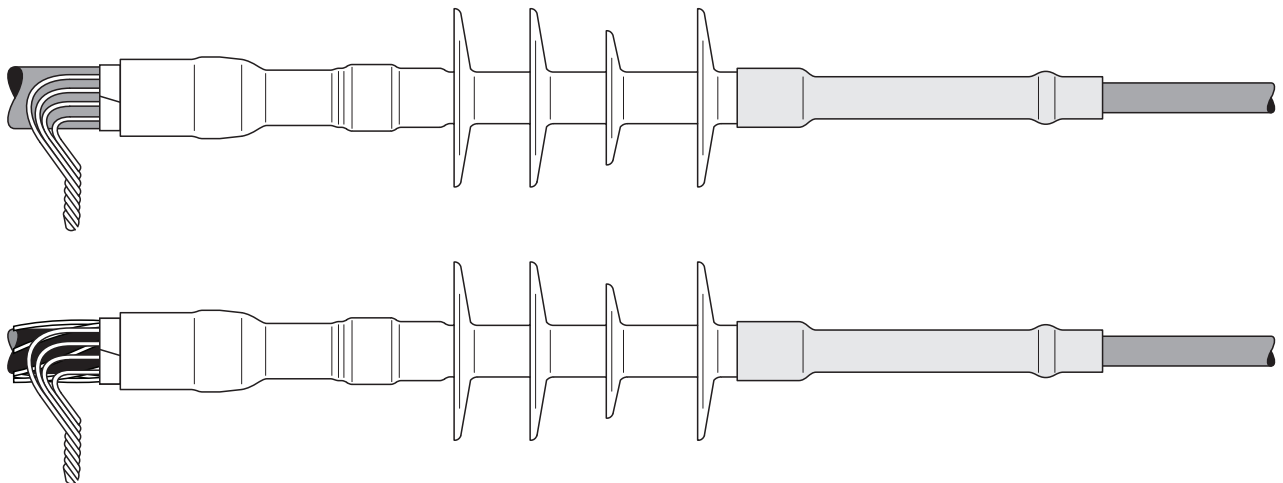
Class 1 Termination

25/28 kV Class

150 kV BIL

CAUTION

Working around energized systems may cause serious injury or death. Installation should be performed by personnel familiar with good safety practice in handling electrical equipment. De-energize and ground all electrical systems before installing product.



1.0 Kit Contents

- 1 High-K, Tracking Resistant, Silicone Rubber Termination
- 1 Cold Shrink Silicone Top Insulator
- 2 Strips Scotch® Mastic Strip 2230 (black with white release liners, bagged)
- 1 Instruction Sheet

NOTE: Do Not use knives to open plastic bags.

Kit Selection Tables

NOTE: Final determination factors are cable insulation, connector and drop wire O.D. Range.

For Use With Compression Lugs or Connectors					
Product Number	Primary Insulation O.D. Range	Jacket O.D. Range	Connector + Drop Wire O.D. Range	Termination Conductor Size Range (AWG & kcmil)	
				15 kV	25/28 kV
7652-S-4-TI	0.64" - 1.08" (16,3 - 27,4 mm)	0.97" - 1.48" (24,6 - 37,6 mm)	0.22"-1.31" (5,6-33,3 mm)	2 - 4/0 (35 - 120 mm ²)	2 - 1/0 (35 - 50 mm ²)
7653-S-4-TI	0.72" - 1.29" (18,3 - 32,8 mm)	1.04" - 1.60" (26,4 - 40,6 mm)	0.22"-1.31" (5,6-33,3 mm)	2/0 - 300 (70 - 150 mm ²)	2 - 4/0 (35 - 120 mm ²)
7654-S-4-TI	0.83" - 1.53" (21,1 - 38,9 mm)	1.12" - 1.87" (28,4 - 47,5 mm)	0.24"-1.60" (6,1-40,6 mm)	4/0 - 500 (120 - 240 mm ²)	2/0 - 250 (70 - 150 mm ²)
7655-S-4-TI	1.05" - 1.80" (26,7 - 45,7 mm)	1.39" - 2.40" (35,3 - 61,0 mm)	0.32"-2.20" (8,1-55,9 mm)	500 - 1000 (240 -500 mm ²)	250 - 800 (150 - 400 mm ²)
7656-S-4-TI	1.53" - 2.32" (38,9 - 58,9 mm)	1.84" - 2.80" (46,8 - 71,1 mm)	0.60"-2.80" (15,2-71,1 mm)	1250 - 2000 (625 - 1000 mm ²)	900 - 1750 (500 - 800 mm ²)

Table 1

For Use With 3M™ Mechanical Shearbolt Lugs QL2 Series: Two Hole						
Kit Number	Primary Insulation O.D. Range	Jacket O.D. Range	Connector + Drop Wire O.D. Range	Conductor Size Range (AWG & kcmil)		3M™ Mechanical Shearbolt Lugs QL2 Series: Two Hole Part Number
				15 kV	25/28 kV	
7652-S-4-TI(L)	0.69" - 1.22" (17,5 - 31,0 mm)	0.97" - 1.48" (24,6 - 37,7 mm)	0.22"-1.31" (5,6-33,3 mm)	1/0 - 4/0 (60 - 120 mm ²)	---	QL2-A-2-250
7653-S-4-TI	0.72" - 1.29" (18,3 - 32,8 mm)	1.04" - 1.60" (26,4 - 40,6 mm)	0.22"-1.31" (5,6-33,3 mm)	2/0 - 250 (70 - 150 mm ²)	2 - 4/0 (35 - 120 mm ²)	QL2-A-2-250
7654-S-4-TI	0.83" - 1.53" (21,1 - 38,9 mm)	1.12" - 1.87" (28,4 - 47,5 mm)	0.24"-1.60" (6,1-40,6 mm)	---	2/0 - 250 (70 - 150 mm ²)	QL2-A-2-250
7654-S-4-TI	0.83" - 1.53" (21,1 - 38,9 mm)	1.12" - 1.87" (28,4 - 47,5 mm)	0.24"-1.60" (6,1-40,6 mm)	4/0 - 350 (120 - 150 mm ²)	2/0 - 250 (70 - 150 mm ²)	QL2-A-1/0-350
7654-S-4-TI	0.83" - 1.53" (21,1 - 38,9 mm)	1.12" - 1.87" (28,4 - 47,5 mm)	0.24"-1.60" (6,1-40,6 mm)	---	4/0 - 250 (120 - 150 mm ²)	QL2-A-4/0-600
7655-S-4-TI	1.05" - 1.80" (26,7 - 45,7 mm)	1.39" - 2.40" (35,3 - 61,0 mm)	0.32"-2.20" (8,1-55,9 mm)	500 (240 mm ²)	250-500 (150-240 mm ²)	QL2-A-4/0-600
7655-S-4-TI	1.05" - 1.80" (26,7 - 45,7 mm)	1.39" - 2.40" (35,3 - 61,0 mm)	0.32"-2.20" (8,1-55,9 mm)	500 - 750 (240 - 325 mm ²)	350 - 750 (240 - 325 mm ²)	QL2-A-350-750
7655-S-4-TI(L)	1.15" - 1.98" (29,2 - 50,3 mm)	1.39" - 2.40" (35,3 - 61,0 mm)	0.32"-2.20" (8,1-55,9 mm)	750 - 1000 (400 - 500 mm ²)	500 - 750 (240 - 325 mm ²)	QL2-A-500-1000
7656-S-4-TI	1.53" - 2.32" (38,9 - 58,9 mm)	1.84" - 2.80" (46,8 - 71,1 mm)	0.60"-2.80" (15,2-71,1 mm)	1250 (625 mm ²)	1000 - 1250 (600 - 625 mm ²)	QL2-A-1000-1250

Table 2

Instructions for Jacketed Concentric Neutral (JCN) Cable

Note: Completed installation illustration on page 8 of instructions.

2.0 Prepare Cable

- 2.1 Check to be sure cable size, connector and drop wire fits within kit size range as shown in Table 1 (For Use With Compression Lugs or Connectors), or Table 2 (For Use With 3M Mechanical Shearbolt Lugs QL2 Series: Two Hole).
- 2.2 Train cable into position and cut to length required for installation. Allow sufficient neutral wire length for grounding connection.
- 2.3 Prepare cable using dimensions shown in Figure 1. **BE SURE TO ALLOW FOR DEPTH OF TERMINAL LUG OR CONNECTOR.** If using 3M Shearbolt Lugs QL2 Series: Two Hole, or 3M Mechanical Shearbolt Connector QCI Series, proceed to Step 2.4. If using a Crimp Type (Compression) lug, measure the depth of the barrel, or if using a Crimp Type (Compression) connector, measure to the barrel center stop/midpoint, and see the NOTE below, in order to calculate the Insulation Removal Length. Table 4 can be used to assist in calculating the total Jacket Removal Length when using a compression lug or connector.

Note: Provide additional exposed conductor distance to account for growth during crimping of ALUMINUM connectors and lugs as follows:

Aluminum Connector and Lug Growth Allowance	2 - 350 1/4" (6 mm)	400 - 650 1/2" (13 mm)	750-1000 3/4" (19 mm)	1250 - 2000 Field determined
---	------------------------	---------------------------	--------------------------	---------------------------------

Table 3

NOTE: It is imperative to remove all remnants of the semi-con layer, even if the semi-con layer comes off as one layer. There should not be any remaining black areas, or particles, on the cable insulation layer.

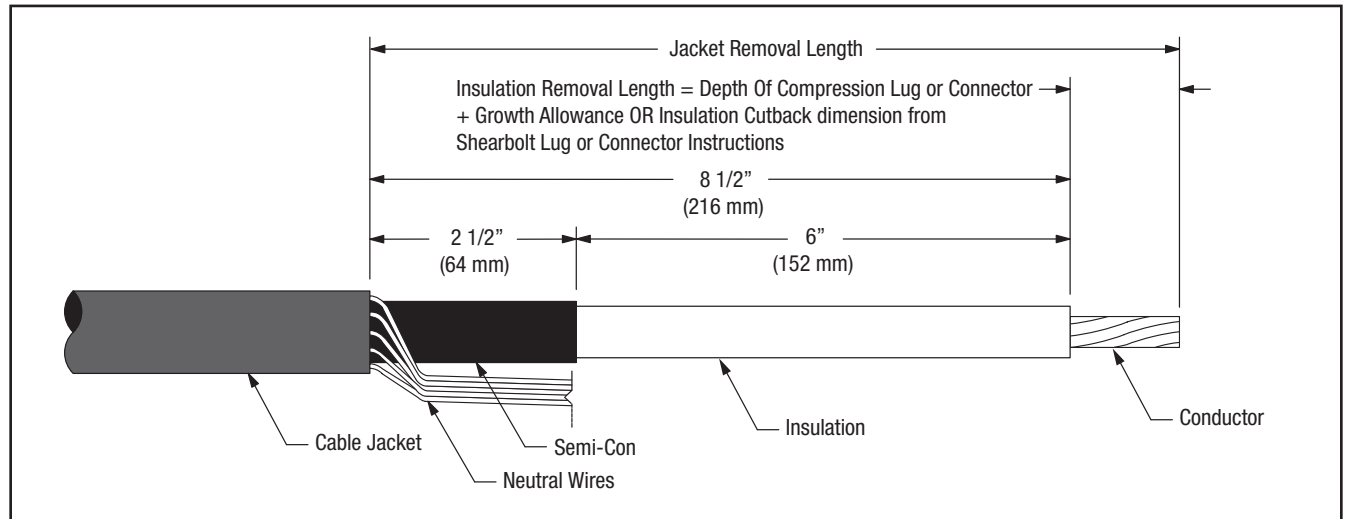


Figure 1

Jacket Removal Calculation Table - Jacketed Concentric Neutral (JCN) Cable - Crimp Type (Compression) Connectors / Lugs - 7652-S-4-TI, 7652-S-4-TI(L), 7653-S-4-TI, 7654-S-4-TI, 7655-S-4-TI, 7655-S-4-TI(L), 7656-S-4-TI			
CABLE PREPARATION ITEM	Inches -Add this column-	mm -Add this column-	NOTES
Insulation Length	8.5"	216 mm	Value from Figure 1
Insulation Removal Length = Depth of Crimp Type (Compression) Terminal Lug or Connector Barrel (See NOTES column.)	+	+	Measure full depth of bore for lugs and to the center stop for connectors.
Growth Allowance (Aluminum Only) for Crimp Type (Compression) Lug / Connector (See NOTES column.)	+	+	See Table 3 for correct growth allowance. This measurement applies only to Aluminum lugs / connectors.
TOTAL JACKET REMOVAL LENGTH	=	=	

Table 4

2.4 If using 3M Mechanical Shearbolt Lugs QL2 Series: Two Hole, or 3M Mechanical Shearbolt Connector QCI Series, refer to the Instructions that are packed with the Shearbolt product for the Insulation Cutback length for the specific Shearbolt Lug or Connector being used. Table 5 can be used to assist in calculating the total Jacket Removal Length when using 3M Mechanical Shearbolt Lugs QL2 Series: Two Hole, or 3M Mechanical Shearbolt Connector QCI Series.

Jacket Removal Calculation Table - Jacketed Concentric Neutral (JCN) Cable - 3M™ Mechanical Shearbolt Lugs QL2 Series / 3M™ Mechanical Shearbolt Connector QCI Series - 7652-S-4-TI, 7652-S-4-TI(L), 7653-S-4-TI, 7654-S-4-TI, 7655-S-4-TI, 7655-S-4-TI(L), 7656-S-4-TI			
CABLE PREPARATION ITEM	Inches -Add this column-	mm -Add this column-	NOTES
Insulation Length	8.5"	216 mm	Value from Figure 1
Insulation Removal Length = Depth of 3M™ Mechanical Shearbolt QL2 Series Lugs: Two Hole Barrel or 3M™ Mechanical Shearbolt Connectors QCI Series Barrel (See NOTES column.)	+	+	Obtain Insulation Removal Length: For Mechanical Shearbolt Lugs see 3M™ Mechanical Shearbolt Lugs QL2 Series: Two Hole Instructions. For Mechanical Shearbolt Connectors see 3M™ Mechanical Shearbolt Connectors QCI Series Instructions.
TOTAL JACKET REMOVAL LENGTH	=	=	

Table 5

- 2.5 Select a Scotch® Mastic Strip 2230 from kit and remove white release liners. Using light tension, apply a **SINGLE WRAP** of mastic around the cable jacket 1/4" (6 mm) from cut edge (Figure 2). Cut off excess.

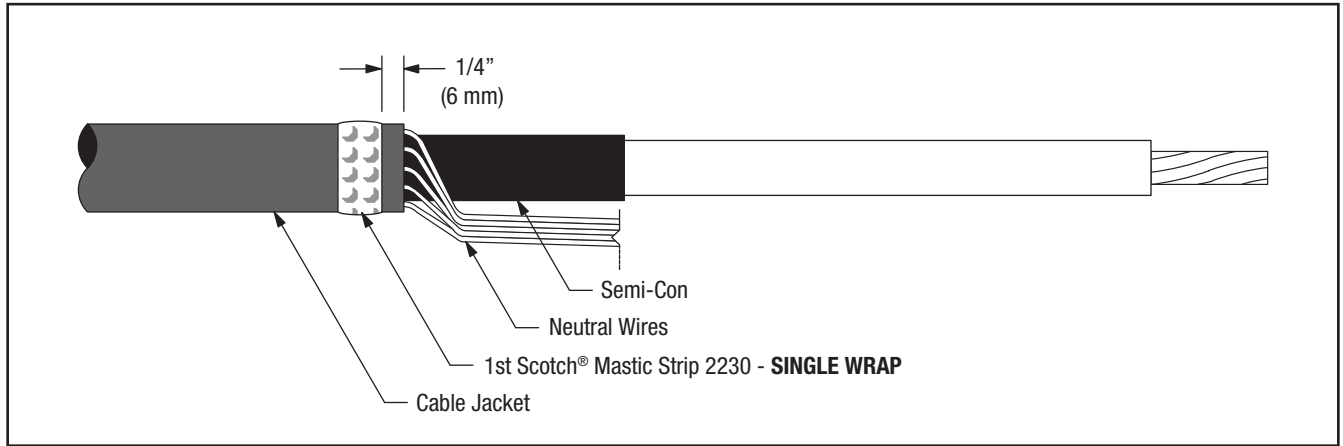


Figure 2

- 2.6 Bend neutral wires back over applied sealing mastic and secure to cable jacket 4 1/2" (114 mm) from cable semi-con edge using vinyl tape (see NOTE and Figure 3).

NOTE: Position vinyl tape with care, it also serves as a marker for positioning the termination.

- 2.7 Select second Scotch® Mastic Strip 2230 from kit and remove white release liners. Apply a second **SINGLE WRAP** of mastic over the neutral wires and previously applied mastic (Figure 3). Cut off excess.
- 2.8 Compress neutral wires into mastic by over-wrapping seal strips with two highly stretched layers of electrical grade vinyl tape (Figure 3). **Be sure to cover all exposed mastic.**

Note: *DO NOT completely cover the neutral wires with electrical grade vinyl tape when applying over the Scotch® Mastic Strip 2230 per Step 2.8. LEAVE AT LEAST 1" (25 MM) OF EXPOSED NEUTRAL WIRES between the Vinyl Tape Marker applied in step 2.6 and the start of the two half-lapped layers of electrical grade vinyl tape covering the Scotch® Mastic Strip 2230 applied in Step 2.8.*

Note: *If using flat strap neutral cable, cover the flat strap neutral wires starting 1" (25 mm) from the Vinyl Tape Marker (that was applied in Step 2.6) and proceed towards the edge of the semi-con layer where the flat strap neutrals are bent back onto the cable jacket, using two half-lapped layers of electrical grade vinyl tape. Be sure to leave 1" (25 mm) of exposed flat strap neutral wires between the Vinyl Tape Marker and the start of the two half-lapped layers of electrical grade vinyl tape covering the flat strap neutral wires. The vinyl tape can extend onto the semi-con layer up to 1/4" (6 mm).*

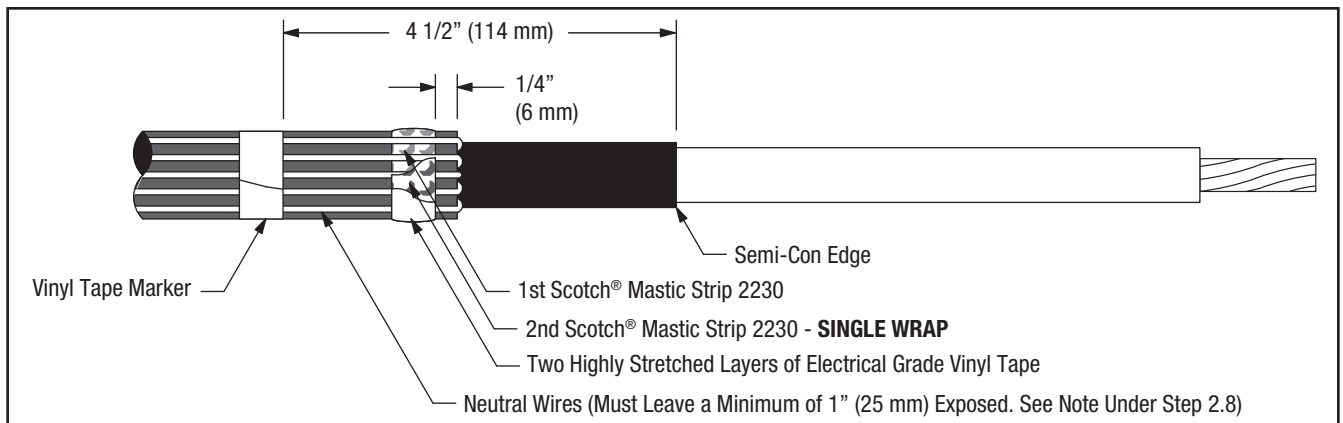


Figure 3

3.0 Install Connector or Lug

Important Packaging Notice

In order to make sure that you receive an undamaged termination, this 3M Cold Shrink QT-III Silicone Rubber Termination is packed with a RED SHIPPING CORE inside of the white core. Please remove the red shipping core BEFORE you install the termination. This shipping core can be recycled with other polypropylene waste.

3.1 Check to insure 3M Cold Shrink QT-III Silicone Rubber Termination assembly fits over the selected connector or lug BEFORE installing the connector or lug. If connector or lug (Figure 4) will not fit through the termination core, clean the insulation (per Step 4.0) and slide termination on cable before installing connector or lug. **DO NOT REMOVE CORE AT THIS TIME.**

3.2 For 3M Compression Connectors and 3M Compression Lugs:

- Refer to pages 16 - 22 for 3M Connector and Lug crimping information
- For Aluminum Conductors - Thoroughly wire brush conductor strands to remove aluminum oxide layer. Insert conductor into lug or connector and then remove conductor. This will transfer some of the antioxidant paste onto the conductor. Wire brush the antioxidant paste into the strands. Immediately insert conductor into lug or connector barrel as far as it will go.

NOTE: Die/crimper head rotation between consecutive crimps is RECOMMENDED

c. Position connector or lug and crimp according to manufacturer's directions. Remove excess oxide inhibitor and sharp crimp flashings following crimping.

3.3 For 3M Mechanical Shearbolt Lugs QL2 Series: Two Hole or 3M Mechanical Shearbolt Connector QCI Series:

- Refer to the Instructions that are packed with the Shearbolt product for the installation procedures.

NOTE: FOR CONNECTORS, CRIMP ONLY POWER CABLE SIDE OF TRANSITION (REDUCER) CONNECTOR AT THIS TIME.

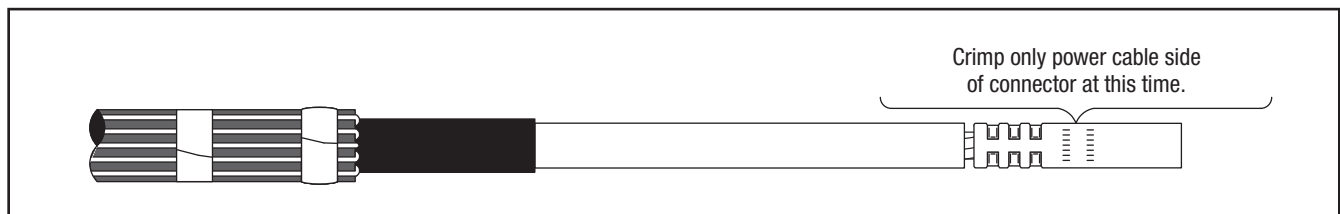


Figure 4

4.0 Clean Cable Insulation and Connector/Lug Barrel Using Standard Practice

4.1 If abrasive must be used:

- Use on insulation only. **DO NOT USE ABRASIVE ON SEMI-CON INSULATION SHIELD!**
- Use only aluminum oxide abrasive; grit 120 or finer.
- Be careful not to reduce the cable insulation diameter below that allowed by the kit.

4.2 Wipe the cable insulation, and lug or connector, with an approved solvent (such as 3M Cable Cleaning Solvent CC Series) AND ALLOW IT TO DRY BEFORE INSTALLING TERMINATION. DO NOT ALLOW SOLVENT TO TOUCH SEMI-CON INSULATION SHIELD!

NOTE: Remaining solvent can be removed using 3M Cable Cleaning Pads CC-DRY (not supplied with kit) or a lint-free cloth.

5.0 Install Termination

- 5.1 Slide the termination body onto the cable and remove core. Make sure the termination body (not the core) is butted up to the edge of the vinyl tape marker previously applied (Figure 5). Pull the core while unwinding, counter-clockwise, starting with the loose end (Figure 5). Be sure to alternate the pulling and unwinding actions (pull-unwind-pull-unwind-etc.) to help prevent the core material from binding up as the core is being removed.

NOTE: Once the termination body makes contact over the mastic seal area, there is no need to continue supporting the assembly. DO NOT PUSH OR PULL ON THE TERMINATION ASSEMBLY WHILE UNWINDING THE CORE..

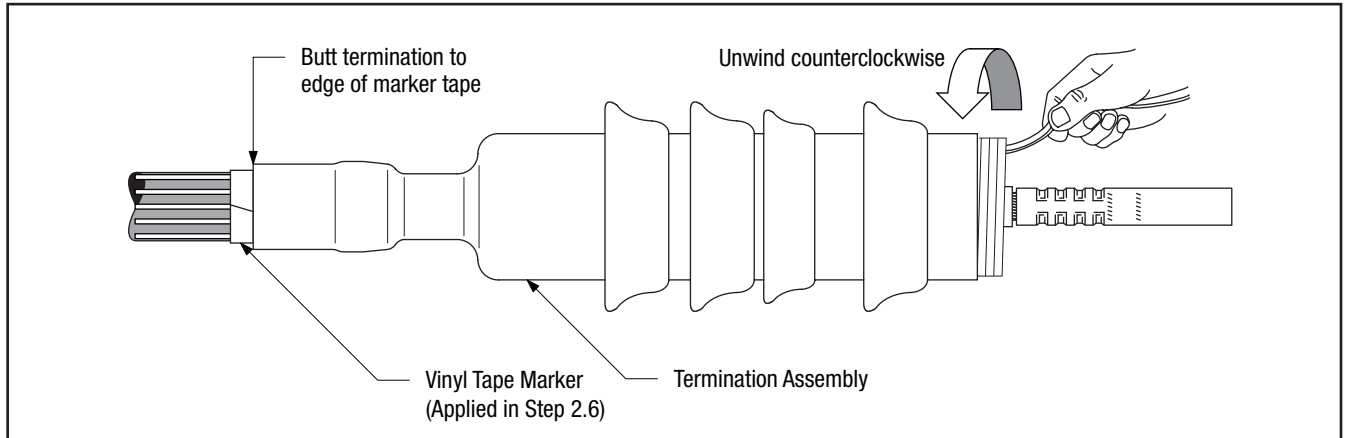


Figure 5

NOTE: The material being removed at this step is mixed polymers and can be recycled with ♻️ waste.

- 5.2 Remove insulation from end of drop wire (See Figure 6).
- If using Crimp Type (Compression) connectors, or lugs, provide additional exposed conductor distance to account for growth during crimping of ALUMINUM connectors or lugs as follows:

Aluminum Connector and Lug Growth Allowance	2 - 350	400 - 650	750-1000	1250 - 2000
	1/4" (6 mm)	1/2" (13 mm)	3/4" (19 mm)	Field determined

Table 6

- If using 3M Mechanical Shearbolt Connector QCI Series, or 3M Mechanical Shearbolt Lugs QL2 Series: Two Hole, refer to the Instructions that are packed with the Shearbolt product for the Insulation Cutback length for the specific Shearbolt Lug or Connector being used.
- 5.3 Position Cold Shrink Top insulator (Figure 6) over drop wire; directing loose core pull tab away from connector/lug area (**DO NOT PULL CORE AT THIS TIME**).

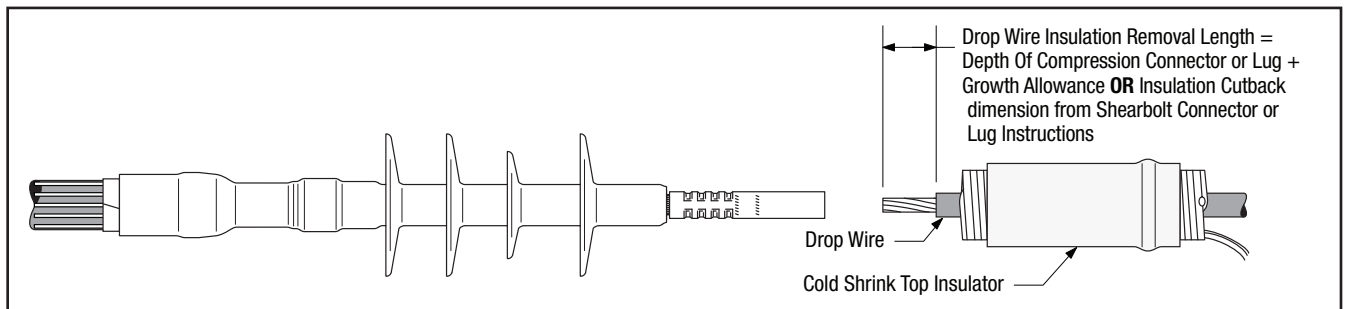


Figure 6

- 5.4 For 3M Compression Connectors and 3M Compression Lugs:
- Refer to pages 16 - 22 for 3M Connector and Lug crimping information
 - For Aluminum Conductors - Thoroughly wire brush conductor strands to remove aluminum oxide layer. Insert conductor into connector or lug and then remove conductor. This will transfer some of the antioxidant paste onto the conductor. Wire brush the antioxidant paste into the strands. Immediately insert conductor into connector or lug barrel as far as it will go.

NOTE: Die/crimper rotation between consecutive crimps is RECOMMENDED.

- c. Insert drop wire into power cable connector, or lug, and crimp according to manufacturer's directions. Remove excess oxide inhibitor and sharp crimp flashings following crimping.
- d. Wipe the drop wire, and connector or lug, with an approved solvent (such as 3M Cable Cleaning Solvent CC Series), to remove excess connector, or lug, antioxidant paste.

NOTE: Remaining solvent can be removed using 3M Cable Cleaning Pads CC-DRY (not supplied with kit) or a lint-free cloth.

- 5.5 For 3M Mechanical Shearbolt Connector QCI Series, or 3M Mechanical Shearbolt Lugs QL2 Series: Two Hole:
 - a. Refer to the Instructions that are packed with the Shearbolt product for the installation procedures.
- 5.6 Slide the top insulator over the termination, lining up the edge of the top insulator tube (not the core) 1" (25 mm) from the termination edge and remove core. Pull the core while unwinding, counter-clockwise, starting with the loose end (Figure 7). Be sure to alternate the pulling and unwinding actions (pull-unwind-pull-unwind-etc.) to help prevent the core material from binding up as the core is being removed.

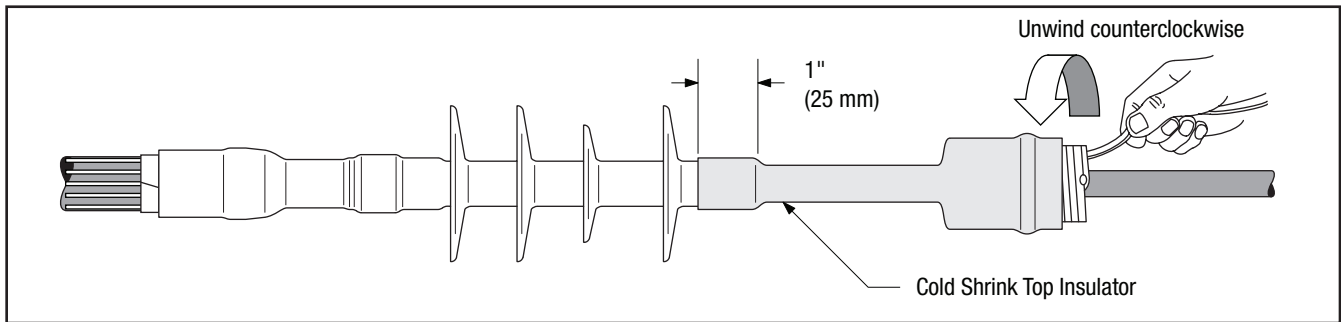


Figure 7

NOTE: The material being removed at this step is mixed polymers and can be recycled with ♻️ waste.

- 5.7 When installed, the Cold Shrink top insulator will overlap the termination.
- 5.8 Collect all concentric neutral wires together (Figure 8) and connect to system ground according to standard practice.

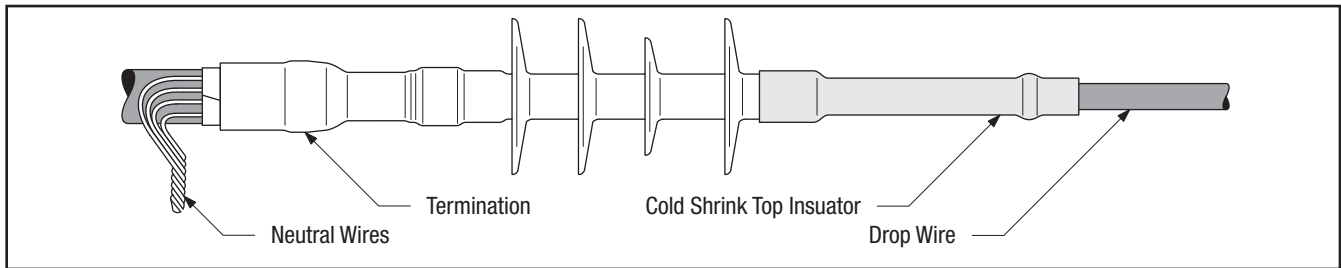
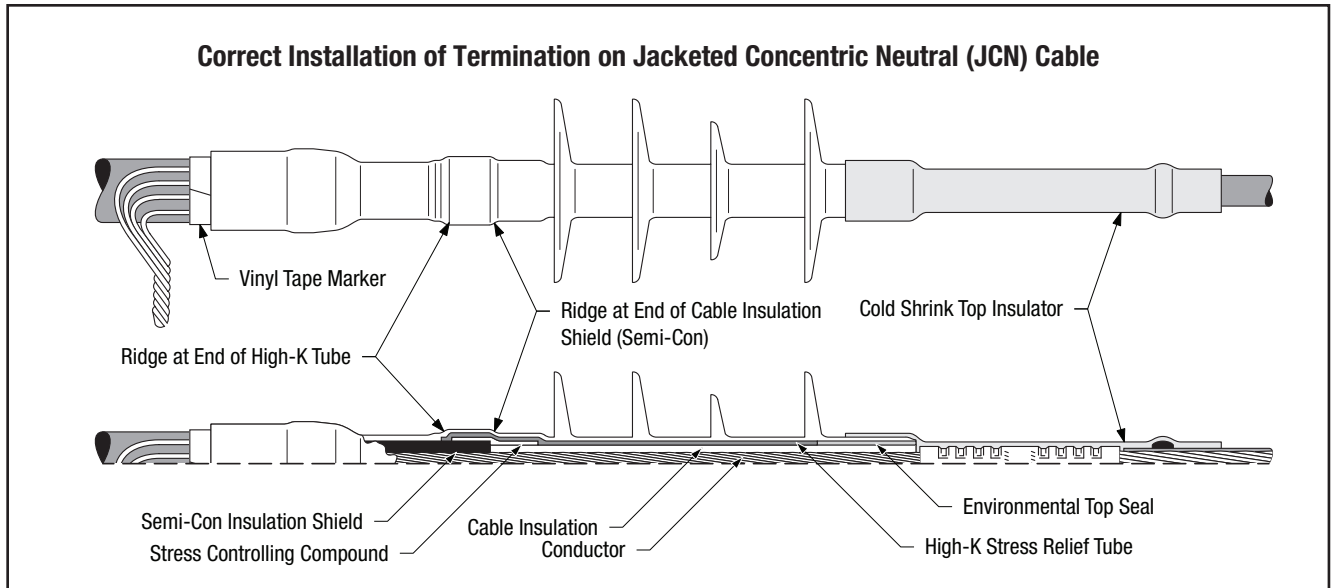


Figure 8



Instructions for Concentric Neutral (CN) Cable

Note: Completed installation illustration on page 14 of instructions.

6.0 Prepare Cable

- 6.1 Check to be sure cable size, connector and drop wire fit within kit size range as shown in Table 1 (For Use With Compression Lugs or Connectors), or Table 2 (For Use With 3M Mechanical Shearbolt Lugs QL2 Series: Two Hole).
- 6.2 Train cable into position and cut to length required for installation. Allow sufficient neutral wire length for grounding connection.
- 6.3 Prepare cable using dimensions shown in Figure 9. **BE SURE TO ALLOW FOR DEPTH OF TERMINAL CONNECTOR OR LUG.** If using 3M Shearbolt Lugs QL2 Series: Two Hole, or 3M Mechanical Shearbolt Connector QCI Series, proceed to Step 6.4. If using a Crimp Type (Compression) lug, measure the depth of the barrel, or if using a Crimp Type (Compression) connector, measure to the barrel center stop/midpoint, and see the NOTE below, in order to calculate the Insulation Removal Length. Table 8 can be used to assist in calculating the total Jacket Removal Length when using a compression lug or connector.

NOTE: Provide additional exposed conductor distance to account for growth during crimping of ALUMINUM connectors or lugs as follows:

Aluminum Connector and Lug Growth Allowance	2 - 350 1/4" (6 mm)	400 - 650 1/2" (13 mm)	750-1000 3/4" (19 mm)	1250 - 2000 Field determined
--	------------------------	---------------------------	--------------------------	---------------------------------

Table 7

NOTE: It is imperative to remove all remnants of the semi-con layer, even if the semi-con layer comes off as one layer. There should not be any remaining black areas, or particles, on the cable insulation layer.

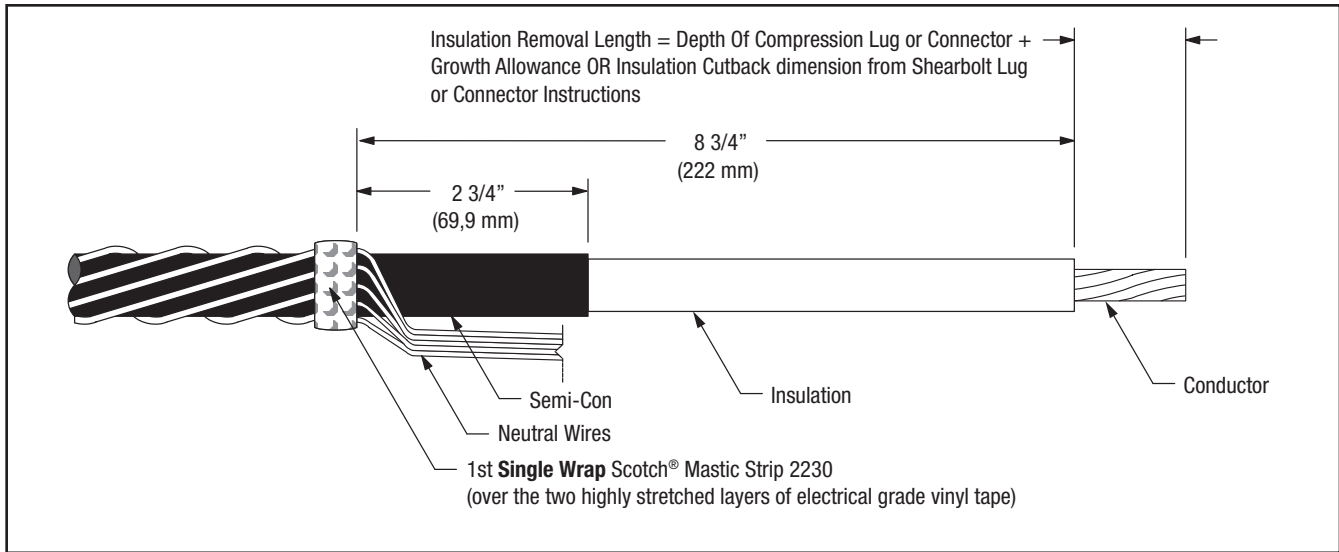


Figure 9

Jacket Removal Calculation Table - Concentric Neutral (CN) Cable - Crimp Type (Compression) Connectors / Lugs- 7652-S-4-TI, 7652-S-4-TI(L), 7653-S-4-TI, 7654-S-4-TI, 7655-S-4-TI, 7655-S-4-TI(L), 7656-S-4-TI			
CABLE PREPARATION ITEM	Inches -Add this column-	mm -Add this column-	NOTES
Insulation Length	8.75"	222 mm	Value from Figure 9
Insulation Removal Length = Depth of Crimp Type (Compression) Terminal Lug or Connector Barrel (See NOTES column.)	+	+	Measure full depth of bore for lugs and to the center stop for connectors.
Growth Allowance (Aluminum Only) for Crimp Type (Compression) Lug / Connector (See NOTES column.)	+	+	See Table 3 for correct growth allowance. This measurement applies only to Aluminum lugs / connectors.
TOTAL JACKET REMOVAL LENGTH	=	=	

Table 8

- 6.4 If using 3M Shearbolt Lugs QL2 Series: Two Hole, or 3M Shearbolt Connector QCI Series, refer to the Instructions that are packed with the Shearbolt product for the Insulation Cutback length for the specific Shearbolt Lug or Connector being used. Table 9 can be used to assist in calculating the total Jacket Removal Length when using 3M Shearbolt Lugs QL2 Series: Two Hole, or 3M Shearbolt Connector QCI Series.
- 6.5 Secure neutral wires to cable with several highly stretched layers of electrical grade vinyl tape around the cable and neutral wires 2 3/4" (69,9 mm) from cut edge of cable semi-con (Figure 9).
- 6.6 Select a Scotch® Mastic Strip 2230 from kit and remove white release liners. Using light tension, wrap a **SINGLE WRAP** of mastic around the cable and neutral wires 2 3/4" (69,9 mm) from cut edge of cable semi-con, directly on top of vinyl tape (Figure 9). Cut off excess.

Jacket Removal Calculation Table - Concentric Neutral (CN) Cable - 3M™ Mechanical Shearbolt Lugs QL2 Series / 3M™ Mechanical Shearbolt Connector QCI Series - 7652-S-4-TI, 7652-S-4-TI(L), 7653-S-4-TI, 7654-S-4-TI, 7655-S-4-TI, 7655-S-4-TI(L), 7656-S-4-TI			
CABLE PREPARATION ITEM	Inches -Add this column-	mm -Add this column-	NOTES
Insulation Length	8.75"	222 mm	Value from Figure 9
Insulation Removal Length = Depth of 3M™ Mechanical Shearbolt QL2 Series Lugs: Two Hole Barrel or 3M™ Mechanical Shearbolt Connectors QCI Series Barrel (See NOTES column.)	+	+	Obtain Insulation Removal Length: For Mechanical Shearbolt Lugs see 3M™ Mechanical Shearbolt Lugs QL2 Series: Two Hole Instructions. For Mechanical Shearbolt Connectors see 3M™ Mechanical Shearbolt Connectors QCI Series Instructions.
TOTAL JACKET REMOVAL LENGTH	=	=	

Table 9

6.7 Bend neutral wires back over applied sealing mastic and secure to cable 4 1/2" (114 mm), below cable semicon edge using vinyl tape (see NOTE and Figure 10).

NOTE: Position vinyl tape with care, it also serves as a marker for positioning the termination.

6.8 Select second Scotch® Mastic Strip 2230 from kit and remove white release liners. Apply a second **SINGLE WRAP** of mastic over the neutral wires and previously applied mastic (Figure 10). Cut off excess.

6.9 Compress neutral wires into Scotch® Mastic Strip 2230 by over-wrapping seal strips with two highly stretched layers of electrical grade vinyl tape (Figure 10). **Be sure to cover all exposed mastic.**

NOTE: **DO NOT** completely cover the neutral wires with electrical grade vinyl tape when applying over the Scotch® Mastic Strip 2230 per Step 6.9 **LEAVE AT LEAST 1" (25 MM) OF EXPOSED NEUTRAL WIRES** between the Vinyl Tape Marker applied in step 6.7 and the start of the two half-lapped layers of electrical grade vinyl tape covering the Scotch® Mastic Strip 2230 applied in Step 6.9.

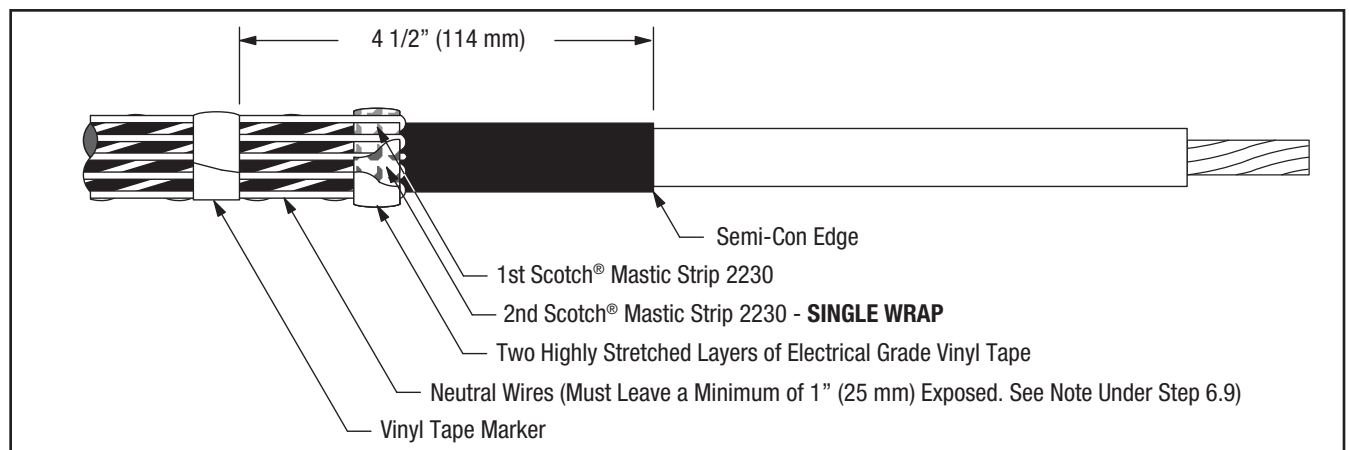


Figure 10

7.0 Install Connector or Lug

Important Packaging Notice

In order to make sure that you receive an undamaged termination, this 3M Cold Shrink QT-III Silicone Rubber Termination is packed with a RED SHIPPING CORE inside of the white core. Please remove the red shipping core BEFORE you install the termination. This shipping core can be recycled with other polypropylene waste.

7.1 Check to insure 3M Cold Shrink QT-III Silicone Rubber Termination assembly fits over the selected connector or lug BEFORE installing the connector or lug. If connector or lug (Figure 11) will not fit through the termination core, clean the insulation (per Step 8.0) and slide termination on cable before installing connector or lug. **DO NOT REMOVE CORE AT THIS TIME.**

7.2 For 3M Compression Connectors and 3M Compression Lugs:
a. Refer to pages 16 - 22 for 3M Connector and Lug crimping information
b. For Aluminum Conductors - Thoroughly wire brush conductor strands to remove aluminum oxide layer. Insert conductor into lug or connector and then remove conductor. This will transfer some of the antioxidant paste onto the conductor. Wire brush the antioxidant paste into the strands. Immediately insert conductor into lug or connector barrel as far as it will go.

NOTE: Die/crimper head rotation between consecutive crimps is RECOMMENDED

c. Position connector or lug and crimp according to manufacturer's directions. Remove excess oxide inhibitor and sharp crimp flashings following crimping.

7.3 For 3M Mechanical Shearbolt Lugs QL2 Series: Two Hole or 3M Mechanical Shearbolt Connector QCI Series:
a. Refer to the Instructions that are packed with the Shearbolt product for the installation procedures.

NOTE: FOR CONNECTORS, CRIMP ONLY POWER CABLE SIDE OF TRANSITION (REDUCER) CONNECTOR AT THIS TIME.

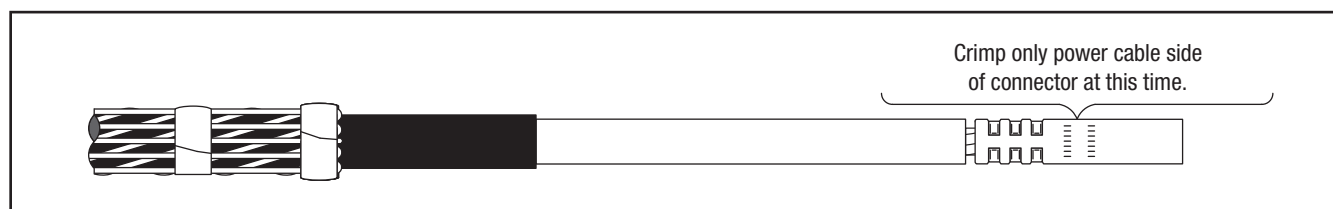


Figure 11

8.0 Clean Cable Insulation and Connector/Lug Barrel Using Standard Practice

- 8.1** If abrasive must be used:
a. Use on insulation only. **DO NOT USE ABRASIVE ON SEMI-CON INSULATION SHIELD!**
b. Use only aluminum oxide abrasive; grit 120 or finer.
c. Be careful not to reduce the cable insulation diameter below that allowed by the kit.
- 8.2** Wipe the cable insulation, and lug or connector, with an approved solvent (such as 3M Cable Cleaning Solvent CC Series) **AND ALLOW IT TO DRY BEFORE INSTALLING TERMINATION. DO NOT ALLOW SOLVENT TO TOUCH SEMI-CON INSULATION SHIELD.**

9.0 Install Termination

9.1 Slide the termination body onto the cable and remove core. Make sure the termination body (not the core) is butted up to the edge of the vinyl tape marker previously applied (Figure 12). Pull the core while unwinding, counterclockwise, starting with the loose end (Figure 12). Be sure to alternate the pulling and unwinding actions (pull-unwind-pull-unwind-etc.) to help prevent the core material from binding up as the core is being removed

NOTE: Once the termination body makes contact over the mastic seal area, there is no need to continue supporting the assembly. DO NOT PUSH OR PULL ON THE TERMINATION ASSEMBLY WHILE UNWINDING THE CORE.

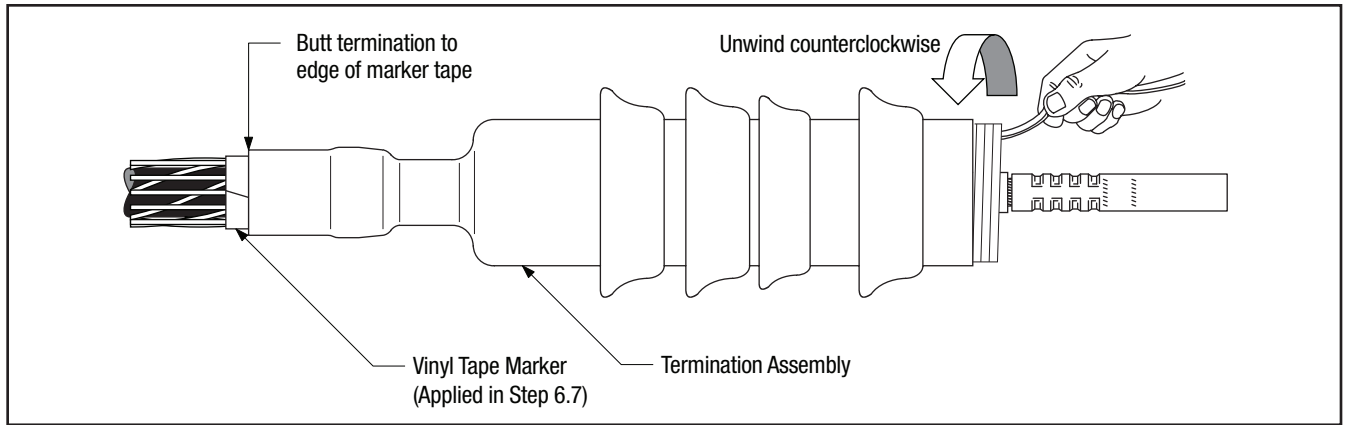


Figure 12

NOTE: The material being removed at this step is mixed polymers and can be recycled with ♻️ waste.

9.2 Remove insulation from end of drop wire (See Figure 13).

NOTE: Provide additional exposed conductor distance to account for growth during crimping of ALUMINUM connectors and lugs as follows:

Aluminum Connector and Lug Growth Allowance	2 - 350 1/4" (6 mm)	400 - 650 1/2" (13 mm)	750-1000 3/4" (19 mm)	1250 - 2000 Field determined
---	------------------------	---------------------------	--------------------------	---------------------------------

Table 10

9.3 Position Cold Shrink top insulator (Figure 13) over drop wire; directing loose core pull tab away from connector/lug area (**DO NOT PULL CORE AT THIS TIME**).

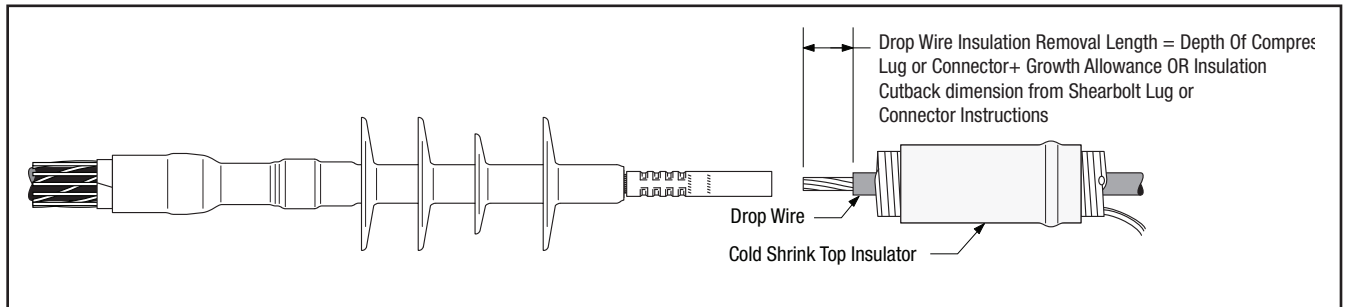


Figure 13

9.4 For 3M Compression Connectors and 3M Compression Lugs:

- a. Refer to pages 16 - 22 for 3M Connector and Lug crimping information
- b. For Aluminum Conductors - Thoroughly wire brush conductor strands to remove aluminum oxide layer. Insert conductor into lug or connector and then remove conductor. This will transfer some of the antioxidant paste onto the conductor. Wire brush the antioxidant paste into the strands. Immediately insert conductor into lug or connector barrel as far as it will go.

NOTE: Die/crimper head rotation between consecutive crimps is **RECOMMENDED**

- c. Insert drop wire into power cable connector or lug and crimp according to manufacturer's directions. Remove excess oxide inhibitor and sharp crimp flashings following crimping.
- d. Wipe the drop wire, and connector or lug, with an approved solvent (such as 3M Cable Cleaning Solvent CC Series), to remove excess connector, or lug, antioxidant paste.

NOTE: Remaining solvent can be removed using 3M Cable Cleaning Pads CC-DRY (not supplied with kit) or a lint-free cloth.

3M™ Cold Shrink QT-III Silicone Rubber Skirted Termination Kit with Top Insulator and High-K Stress Relief

- 9.5 For 3M Mechanical Shearbolt Lugs QL2 Series: Two Hole or 3M Mechanical Shearbolt Connector QCI Series:
 - a. Refer to the Instructions that are packed with the Shearbolt product for the installation procedures.
- 9.6 Slide the top insulator over the termination, lining up the edge of the top insulator tube (not the core) 1" (25 mm) from the termination edge and remove core. Pull the core while unwinding, counter-clockwise, starting with the loose end (Figure 14). Be sure to alternate the pulling and unwinding actions (pull-unwind-pull-unwind-etc.) to help prevent the core material from binding up as the core is being removed.

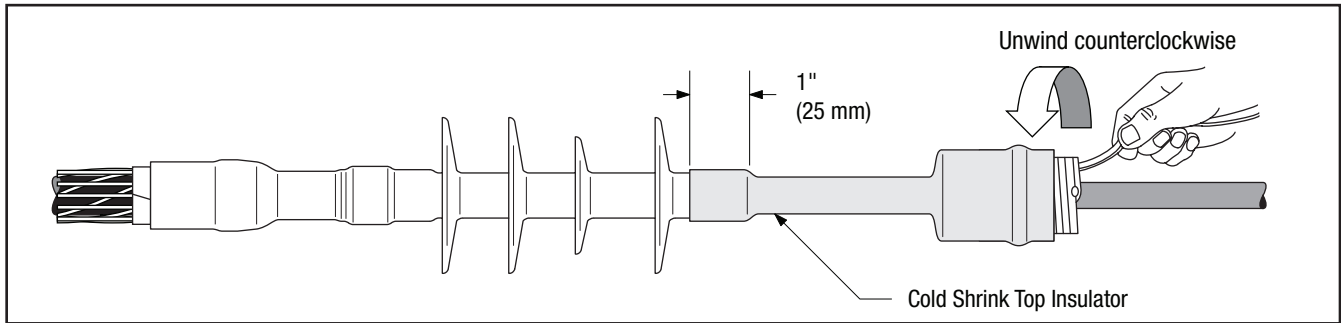


Figure 14

NOTE: The material being removed at this step is mixed polymers and can be recycled with ♻️ waste.

- 9.7 When installed, Cold Shrink insulator will overlap the termination.
- 9.8 Collect all concentric neutral wires together (Figure 15) and connect to system ground according to standard practice.

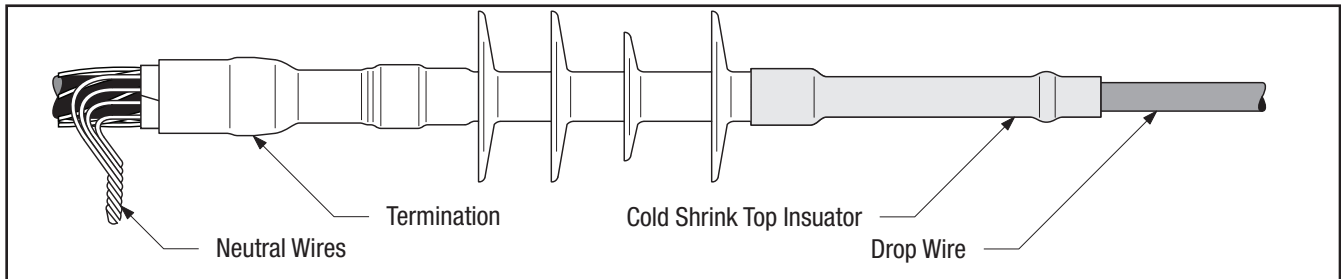
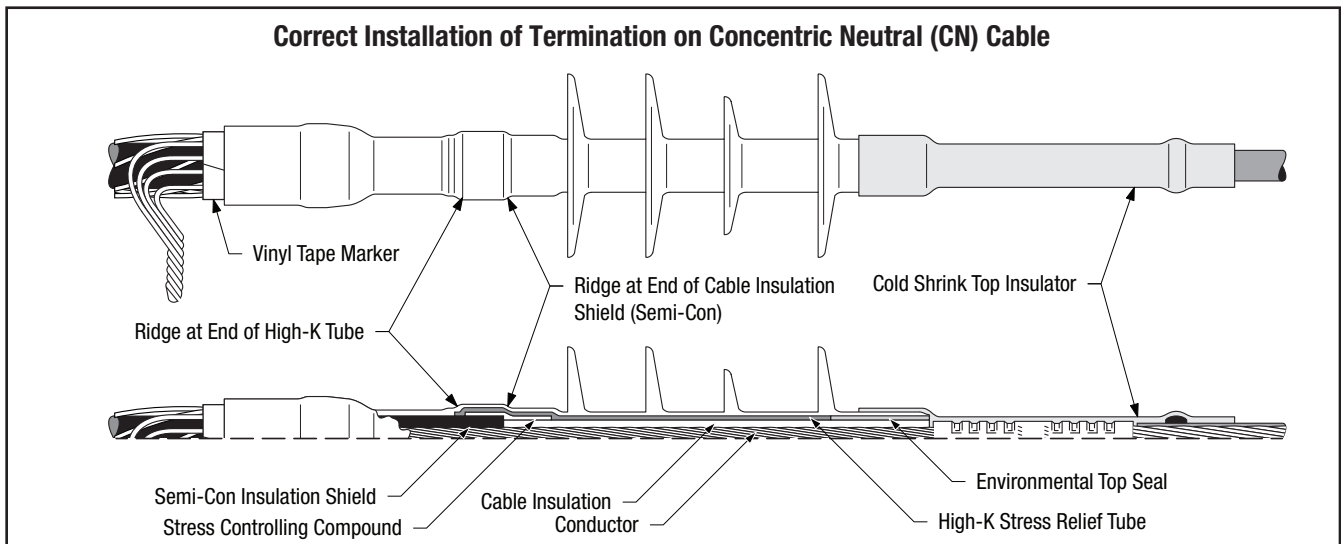


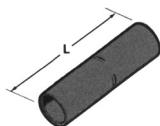
Figure 15



Tooling Index 3M™ Scotchlok™ Copper Connectors:

- USE ON COPPER CONDUCTORS ONLY.
- Standard or long barrel design
- One-piece seamless, high-conductivity copper.
- Electro-tin plated to resist electrolytic corrosion.

Standard Barrel

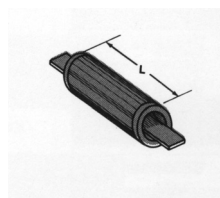


Long Barrel

Stranded Wire Size	Dimensions (Inches & Millimeters)			Color Code	Catalog Number
	I.D.	O.D.	L		
6	.196 (5,0)	.290 (7,4)	1.750(44,5)	Blue	10001
4	.247 (6,2)	.340 (8,6)		Gray	10002
2	.307 (7,8)	.416 (10,6)	1.880 (47,7)	Brown	10003
1	.358 (9,1)	.462 (11,7)		Green	10004
1/0	.394 (10,0)	.512 (13,0)	2.000 (50,8)	Pink	10005
2/0	.439 (11,2)	.560 (14,2)		Black	10006
3/0	.490 (12,4)	.617 (15,7)	2.130 (54,0)	Orange	10007
4/0	.548(13,9)	.687 (17,4)		Purple	10008
250	.595 (15,1)	.750 (19,1)	2.250 (57,2)	Yellow	10009
300	.650 (16,5)	.813 (20,7)		White	10010
350	.700 (17,8)	.875 (22,2)	2.380 (60,4)	Red	10011
500	.836 (21,2)	1.059 (26,9)	2.880 (73,1)	Brown	10014
750	1.031 (26,2)	1.299 (33,0)	3.380 (85,8)	Black	10019
1000	1.173 (29,8)	1.500 (38,1)	3.880 (98,5)	White	10024
2/0	.439 (11,2)	.560 (14,2)	3.130 (79,4)	Black	11006
3/0	.490 (12,4)	.617(15,7)		Orange	11007
4/0	.548 (13,9)	.687 (17,4)	3.380 (85,8)	Purple	11008
250	.595 (15,1)	.750 (19,1)		Yellow	11009
300	.650 (16,5)	.813 (20,7)	4.130 (104,8)	White	11010
350	.700 (17,8)	.875 (22,2)		Red	11011
500	.836 (21,2)	1.059 (26,9)	4.630 (117,5)	Brown	11014
750	1.031 (26,2)	1.299 (33,0)	5.880 (149,3)	Black	11019
1000	1.173 (29,8)	1.500 (38,1)	6.130 (155,6)	White	11024

3M™ Scotchlok™ Copper/Aluminum Connectors (AL9CU)

- USE ON EITHER COPPER OR ALUMINUM CONDUCTORS.
- Color-coded end caps for connector identification.
- Electro-tin plated to resist electrolytic corrosion.
- Antioxidant material (compatible with solid insulations) in connector barrel to facilitate clean conductor to connector contact.



Wire Size	Dimensions (Inches & Millimeters)			Color Code	Catalog Number
	I.D.	O.D.	L		
6	.200 (5,1)	.344 (8,8)	1.620 (41,1)	Gray	20001
4	.272 (6,9)	.480 (12,2)	2.125 (53,9)	Green	20002
2	.307 (7,8)	.531 (13,5)	2.000 (50,8)	Pink	20003
1	.350 (8,9)	.531 (13,5)	2.000 (50,8)	Gold	20004
1/0	.394 (10,0)	.635 (16,1)	2.120 (53,8)	Tan	20005
2/0	.445 (11,3)	.690 (17,5)	2.310 (58,7)	Olive	20006
3/0	.484 (12,3)	.760 (19,3)	2.620 (66,5)	Ruby	20007
4/0	.547 (13,9)	.875 (22,2)	2.750 (69,9)	White	20008
250	.594 (15,1)	.906 (23,0)	2.940 (74,7)	Red	20009
300	.650 (16,5)	1.00 (25,4)	3.120 (79,2)	Dk. Blue	20010

Tooling Index 3M™ Scotchlok™ Copper/Aluminum Connectors (AL9CU) (continued)

Wire Size	Dimensions (Inches & Millimeters)			Color Code	Catalog Number
	I.D.	O.D.	L		
350	.720 (18,3)	1.120 (28,6)	3.380 (85,9)	Brown	20011
400	.762 (19,3)	1.187 (30,1)	3.750 (95,3)	Green	20012
500	.843 (21,4)	1.320 (33,5)	3.880 (98,6)	Pink	20014
600	.923 (23,4)	1.430 (36,3)	4.120 (104,6)	Black	20016
750	1.031 (26,2)	1.594 (40,5)	4.620 (117,3)	Yellow	20019
800	1.060 (26,9)	1.655 (42,0)	4.750 (120,7)	Lt. Blue	20020
1000	1.193 (30,3)	1.843 (46,8)	5.250 (133,4)	Brown	20024

Tooling Index 3M™ Scotchlok™ Copper Connectors

Cable Size	3M™ Scotchlok™ Copper Connector Number	CRIMPING TOOL-DIE SETS (MINIMUM NO. OF CRIMPS/END)							
		Burdny Corporation				Thomas & Betts Corporation			Square D Co. Anderson Div.
		MD6	MY29	Y34A	Y35,39, Y45*, Y46*	TBM 5	TBM 8	TBM 15	VC6-3, VC6-FT**
6	10001	--	6 AWG(1)	--	U5CRT(1)	Blue(1)	Blue(1)	--	(1)
4	10002	W161(1)	4AWG(1)	A4CR(1)	U4CRT(1)	Gray(1)	Gray(1)	--	(1)
2	10003	W162(2)	2 AWG(1)	A2CR(1)	U2CRT(2)	Brown(1)	Brown(1)	33(1)	(2)
1	10004	--	1 AWG(1)	A1CR(1)	U1CRT(2)	Green(1)	Green(1)	37(1)	(2)
1/0	10005	W163(2)	1/0(1)	A25R(1)	U25RT(1)	Pink(2)	Pink(2)	42(2)	(1)
2/0	10006	W241(2)	2/0(1)	A26R(1)	U26RT(2)	Black(2)	Black(2)	45(1)	(1)
2/0	11006	W241(3)	2/0(2)	A26R(2)	U26RT(3)	Black(3)	Black(3)	45(2)	(2)
3/0	10007	W243(2)	3/0(1)	A27R(1)	U27RT(2)	Orange(2)	Orange(2)	50(1)	(1)
3/0	11007	W243(3)	3/0(2)	A27R(2)	U27RT(3)	Orange(3)	Orange(3)	50(2)	(2)
4/0	10008	BG(3)	4/0(1)	A28R(2)	U28RT(2)	Purple(2)	Purple(2)	54H(2)	(2)
4/0	11008	BG(4)	4/0(2)	A28R(3)	U28RT(3)	Purple(3)	Purple(3)	54H(3)	(3)
250	10009	W166(3)	250(1)	A29R(2)	U29RT(2)	Yellow(2)	Yellow(2)	62(2)	(2)
250	11009	W166(4)	250(2)	A29R(3)	U29RT(3)	Yellow(3)	Yellow(3)	62(3)	(3)
300	10010	--	--	A30R(2)	U30RT(2)	--	White(2)	66(2)	(2)
300	11010			A30R(3)	U30RT(3)		White(3)	66(3)	(3)
350	10011	--	--	A31R(2)	U31RT(2)	--	Red(3)	71H(3)	--
350	11011			A31R(3)	U31RT(3)		Red(4)	71H(4)	
500	10014	--	--	A34R(2)	U34RT(2)	--	Brown(3)	87H(3)	--
500	11014			A34R(4)	U34RT(3)		Brown(4)	87H(4)	
750	10019	--	--	--	Y39,Y45,Y46: U39RT(3)	--	--	106H(3)	--
750	11019	--	--	--	Y39,Y45,Y46: U39RT(5)	--	--	106H(4)	--
1000	10024	--	--	--	Y45: S44RT(4) Y46: P44RT(4)	--	--	125H(3)	--
1000	11024	--	--	--	Y45: S44RT(6) Y46: P44RT(6)	--	--	125H(4)	--

*Y45 and Y46 accept all Y35 dies ("U" series). For Y45 use PT6515 adapter. For Y46 use PUADP adapter.

**Anderson VC6-3 and VC6-FT are dieless and do not require a die set.

Tooling Index 3M™ Scotchlok™ Copper/Aluminum Connectors

3M™ Scotchlok™ Connector	Conductor Size AWG or kcmil (MCM)	CRIMPING TOOL-DIE SETS (MINIMUM NO. OF CRIMPS/END)									
		Burdyn Corporation						Thomas & Betts Corporation			Kearney
		Die Index	MD6	Y35	Y39	Y45	Y46	TBM 5	TBM 8	TBM 15	WH2,052
20001	6 AWG	161 346	W161 (1) -----	U161 (1) U6CABT (1)	----- U6CABT (1)	U161 (1) U6CABT (1)	U161 (1) U6CABT (1)	Grey (1)	Grey (1)	29 (1)	5/16 (1)
20002	4 AWG	162 375	W162 (2) -----	U162 (1) U4CABT (1)	----- U4CABT (1)	U162 (1) U4CABT (1)	U162 (1) U4CABT (1)	Green (2)	Green (2)	37 (1)	-----
20003	2 AWG	163 348	W163 (3) -----	U163 (1) U2CABT (1)	----- U2CABT (1)	U163 (1) U2CABT (1)	U163 (1) U2CABT (1)	Gold (2)	Gold (2)	45 (2)	1/2 (2)
20004	1 AWG	163 348	W163 (3) -----	U163 (1) U2CABT (1)	----- U2CABT (1)	U163 (1) U2CABT (1)	U163 (1) U2CABT (1)	Gold (2)	Gold (2)	45 (1)	1/2 (2)
20005	1/0 AWG	BG 243	W-BG (2) W243 (2)	U-BG (2) U243 (1)	----- -----	U-BG (2) U243 (1)	U-BG (2) U243 (1)	Tan (3)	Tan (3)	52 (1)	5/8 (3)
20006	2/0 AWG	297	-----	U26ART (2)	U26ART (2)	U26ART (2)	U26ART (2)	Olive (3)	Olive (3)	58 (2)	5/8-1 (3)
20007	3/0 AWG	167 467	----- -----	U167 (2) U27ART (3)	----- U27ART (3)	U167 (2) U27ART (3)	U167 (2) U27ART (3)	Ruby (3)	Ruby (3)	66 (1)	-----
20008	4/0 AWG	296	-----	U28ART (2)	U28ART (2)	U28ART (2)	U28ART (2)	-----	White (3)	71H (3)	640 (3)
20009	250 kcmil	249	W249 (2)	U249 (1)	-----	U249 (1)	U249 (1)	-----	Red (2)	76 (1)	640 (3)
20010	300 kcmil	251 470	----- -----	U251 (2) U30ART (2)	----- U30ART (2)	U251 (2) U30ART (2)	U251 (2) U30ART (2)	-----	Blue (3)	87H (2)	1 (3)
20011	350 kcmil	299 655	----- -----	U31ART (2) U655 (2)	U31ART (2) -----	U31ART (2) U655 (2)	U31ART (2) U655 (2)	-----	Brown (4)	96 (2)	1 1/8-1 (2)
20012	400 kcmil	472 655	----- -----	U32ART (3) U655 (2)	U32ART (3) -----	U32ART (3) U655 (2)	U32ART (3) U655 (2)	-----	-----	96 (2)	1 1/8-1 (2)
20014	500 kcmil	300 317	----- -----	U34ART (4) U317 (3)	U34ART (4) -----	U34ART (4) U317 (3)	U34ART (4) U317 (3)	-----	-----	106A (2)	1 5/16 (3)
20016	600 kcmil	473 786 936	----- ----- -----	U36ART (3) U786* -----	U36ART (3) ----- U39ART-2(2)	U36ART (3) S786* U39ART-2 (2)	U36ART (3) P786* U39ART-2 (2)	-----	-----	115H (3)	1 5/16 (3)
20019	750 kcmil	608 786 936	----- ----- -----	U608 (2) U786* -----	----- ----- U39ART-2(3)	U608 (2) S786* U39ART-2 (3)	U608 (2) P786* U39ART-2 (3)	-----	-----	125H (4)	1 1/2 (3)
20020	800 kcmil	342 474	----- -----	----- -----	----- -----	S342 (2) S40ART (2)	P342 (2) P40ART (2)	-----	-----	140H (2)	1 1/2 (3)
20024	1000 kcmil	292 302 319 352	----- ----- ----- -----	----- ----- ----- -----	----- ----- ----- -----	S292 (4) S44ART (4) S319 (3) S352 (3)	P292 (2) P44ART (2) P319 (2) P352 (2)	-----	-----	161 (2)	1 3/4 (3)

*Install as many crimps as possible without overlapping. () Indicates minimum number of crimps for each cable insertion.

3M™ Scotchlok™ Reducer Series Connectors 2000T-Cu/Al

2000T CONNECTOR		CRIMPING TOOL/DIE SETS (MINIMUM NO. OF CRIMPS/END)													Kearney-Natl'l Inc.	
		Burdndy Corporation					Thomas & Betts Corporation			Square D Co. Anderson Div.		Type 0				
2000T CONNECTOR O.D., in.	Index #	MD6	MY29	Y34A	Y35, Y45*, Y46*	Y1000**	TBM 8	TBM 12	TBM 15	V06-3**	V06-FT**	Type 0				
2000T 4-1/0 CU/AL	243	BG (3)	---	U243 (1)	U25ART (1)	---	Olive (2)	---	54H (1)	(1)	---	5/8-1 (3)	5/8***			
2000T 3-1/0 CU/AL	243	BG (3)	---	U243 (1)	U25ART (1)	---	Olive (2)	---	54H (1)	(1)	---	5/8-1 (3)	5/8***			
2000T 2-1 CU/AL	243	BG (3)	---	U243 (1)	U25ART (1)	---	Olive (2)	---	54H (1)	(1)	---	5/8-1 (3)	5/8***			
2000T 2-1/0 CU/AL	243	BG (3)	---	U243 (1)	U25ART (1)	---	Olive (2)	---	54H (1)	(1)	---	5/8-1 (3)	5/8***			
2000T 1-1/0 CU/AL	243	BG (3)	---	U243 (1)	U25ART (1)	---	Olive (2)	---	54H (1)	(1)	---	5/8-1 (3)	5/8***			
2000T 1/0-2/0 CU/AL	298	W249 (3)	---	---	U28ART (2)	---	Blue (4)	76 (2)	71H (2)	(2)	---	840 (4)	840***			
2000T 3/0-350 CU/AL	299	---	---	---	U31ART (2)	---	---	87 (2)	87H (2)	(3)	---	---	1 1/8***			
2000T 4/0-350 CU/AL	299	---	---	---	U31ART (2)	---	---	87 (2)	87 H(2)	(3)	---	---	1 1/8***			
2000T 250-350 CU/AL	299	---	---	---	U31ART (2)	---	---	87 (2)	87H (2)	(3)	---	---	1 1/8***			
2000T 300-350 CU/AL	299	---	---	---	U31ART (2)	---	---	87 (2)	87H (2)	(3)	---	---	1 1/8***			
2000T 400-500 CU/AL	300	---	---	---	U34ART (3)	---	---	---	106H (3)	(3)	---	---	1 5/16***			
2000T 500-750 CU/AL	301	---	---	---	S39ART (3)	---	---	---	140H (3)	(3)	---	---	1 1/2***			
2000T 500-800 CU/AL	301	---	---	---	S40ART (3) or S39ART (3)	---	---	---	140H (3)	(3)	---	---	1 1/2***			
2000T 500-1000 CU/AL	301	---	---	---	S40ART (3) or S39ART (3)	---	---	---	140H (3)	(3)	---	---	1 1/2***			
2000T 600-750 CU/AL	301	---	---	---	S39ART (3)	---	---	---	125H (3)	(3)	---	---	1 1/2***			
2000T 650-750 CU/AL	301	---	---	---	S39ART (3)	---	---	---	125H (3)	(3)	---	---	1 1/2***			
2000T 700-750 CU/AL	301	---	---	---	S39ART (3)	---	---	---	125H (3)	(3)	---	---	1 1/2***			
2000T 750-800 CU/AL	301	---	---	---	S40ART (3) or S39ART (3)	---	---	---	140H (3)	(3)	---	---	1 1/2***			
2000T 750-1000 CU/AL	301	---	---	---	S40ART (3) or S39ART (3)	---	---	---	140H (3)	(3)	---	---	1 1/2***			
2000T 2/0-4/0 CU/AL	298	W249 (3)	---	---	U28ART (2)	---	Blue (4)	76 (2)	71H (2)	(2)	---	840 (4)	840***			
2000T 350-500 CU/AL	300	---	---	---	U34ART (3)	---	---	---	106H (3)	(3)	---	---	1 5/16***			
2000T 800-1000 CU/AL	301	---	---	---	S40ART (3)	---	---	---	140H (3)	(3)	---	---	1 1/2***			
2000T 250-500 CU/AL	300	---	---	---	U34ART (3)	---	---	---	106H (3)	(3)	---	---	1 5/16***			

*Y45 and Y46 accept all Y35 dies ("U" series). For Y45 use PT6515 adapter. For Y46 use PUADP adapter.
 **Anderson V06-3 and V06-FT and Burndy Y1000 require no die set.
 *** Install as many crimps as possible without overlapping.

Tooling Index 3M™ CI-T Series Transition Connectors

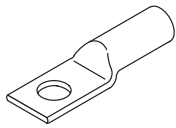
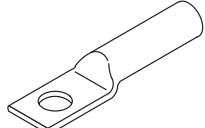
Product Number	Conductor Size Cu or Al				Connector O.D.
	From Cable A		to Cable B		
	Str.	Solid	Str.	Solid	
CI-T-1	4	2	1	1/0	0.64" (16,2 mm)
CI-T-2	2	1	1	1/0	0.64" (16,2 mm)
CI-T-3	4	2	1/0	--	0.64" (16,2 mm)
CI-T-4	2	1	1/0	--	0.64" (16,2 mm)
CI-T-5	2	1	4	2	0.64" (16,2 mm)
CI-T-9	1	1/0	1/0	--	0.64" (16,2 mm)

Tooling Index All listed 3M CI-T Series connectors can be crimped with any of the following tools.

Mfg.	Crimping Tool Table			
	Mechanical		Hydraulic	
	Tool	Die (Minimum No. Crimps per end)	Tool	Die (Minimum No. Crimps per end)
Burndy	MD6	BG (3)	Y-35, Y-39, Y-45*, Y46*	U25 ART (1)
Kearney	0-52, 0-51	5/8-1 (3)	12.20 & 40 Ton	5/8-1 (3)
T & B	TBM-8	Olive(2)	TBM-15	50 (1)
Anderson	--	--	VC6**	(1)

*Y45 and Y46 accept all Y35 dies ("U" series). For Y45 use PT6515 adapter. For Y46 use PUADP dapter. **Anderson VC6-3 is dieless and does not require a die set.

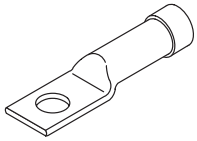
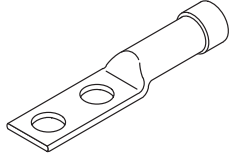
Tooling Index

Lug and Crimping Information for 3M™ Scotchluk™ Copper Lugs										
30014 thru 30045 One hole							31036 thru 31068 One hole-long barrel			
Cable Size AWG/ kcmil	Stud Size (in.)	3M™ Scotchluk™ Copper Lug Number	Burdny Corporation				Thomas & Betts Corporation			Square D Co. Anderson Div.
			MD6	MY29	Y34A	Y35, Y39, Y45*, Y46*	TBM 5	TBM 8	TBM 15	VC6-3, VC6-FT**
6	10 1/4 5/16	30014 30015 30016	–	6AWG(1)	–	U5CRT(1)	Blue(1)	Blue(1)	–	(1)
4	10 1/4 3/8	30018 30019 30021	W161(1)	4AWG(1)	A4CR(1)	U4CRT(1)	Grey(1)	Grey(1)	–	(1)
2	1/4 5/16 3/8	30022 30023 30024	W162(2)	2AWG(1)	A2CR(1)	U2CRT(2)	Brown(1)	Brown(1)	33(1)	(2)
1	5/16 3/8	30027 30028	–	1AWG(1)	A1CR(1)	U1CRT(2)	Green(1)	Green(1)	37(1)	(2)
1/0	5/16 3/8	30031 30032	W163(2)	1/0(1)	A25R(1)	U25RT(1)	Pink(2)	Pink(2)	42H(2)	(1)
2/0	3/8 3/8	30036 31036	W241(2) W241(3)	2/0(1) 2/0(2)	A26R(1) A26R(2)	U26RT(2) U26RT(3)	Black(2) Black(3)	Black(2) Black(3)	45(1) 45(2)	(1) (2)
3/0	1/2 1/2	30041 31041	W243(2) W243(3)	3/0(1) 3/0(2)	A27R(1) A27R(2)	U27RT(2) U27RT(3)	Orange(2) Orange(3)	Orange(2) Orange(3)	50(1) 50(2)	(2) (3)
4/0	1/2 1/2 1/2	30045 31045 31145	BG(3) BG(4) BG(4)	4/0(1) 4/0(2) 4/0(2)	A28R(2)	U28RT(2) U28RT(3) U28RT(3)	Purple(2) Purple(3) Purple(3)	Purple(2) Purple(3) Purple(3)	54H(2) 54H(3) 54H(3)	(2) (3) (3)
250	1/2 1/2	31049 31149	W166(4)	250(2)	A29R(2)	U29RT(3)	Yellow(2)	Yellow(2)	62(2)	(2)
300	1/2 1/2	31053 31153	–	–	A30R(2)	U30RT(3)	–	White(3)	66(3)	(3)
350	1/2 1/2	31056 31156	–	–	A31R(2)	U31RT(3)	–	Red(4)	71H(4)	–
400	1/2 1/2	31060 31160	–	–	A32R(2)	U32RT(3)	–	Blue(4)	76H(4)	–
500	1/2 5/8 1/2	31066 31067 31166	–	–	A34R(2)	U34RT(3)	–	Brown(4)	87H(4)	–
600	1/2 1/2	31068 31168	–	–	–	U36RT(3)	–	Green(4)	94H(4)	–
750	1/2	31172	–	–	–	Y39, Y45, Y46 U39RT(5)	–	–	106H(4)	–
1000	1/2	31178	–	–	–	Y45: S44RT(6) Y46: P44RT(6)	–	–	125H(4)	–

* Y45 and Y46 accept all Y35 dies ("U" series). For Y45 use PT6515 adapter. For Y46 use PUADP adapter.

** Anderson VC6-3 and VC6-FT require no die set.

Tooling Index

Lug and Crimping Information for 3M™ Scotchlok™ Copper/Aluminum Lugs															
40016 thru 40079 One hole							40132 thru 40178 Two hole								
Cable Size AWG/ kcmil	Stud Size (in.)	3M™ Scotchlok™ Lug Number	Crimping Tool-Die Sets (Minimum Number Of Crimps)												
			Burdny Corporation					Thomas & Betts Corporation				Square D Co. Anderson Div.		ITT Blackburn Co.	Kearny Nat'l Div.
			MD6	MY29	Y34A	Y35, Y39, Y45*, Y46*	Y1000**	TBM 5	TBM 8	TBM 12	TBM 15	VC6-3** VC6-FT**	VC8C**	OD58	TYPE 0
6	5/16	40016	W161(1)	6AWG(1)	A6CAB(1)	U6CABT(1)	(1)	Grey(1)	Grey(1)	-	29(1)	(1)	-	BY19(3)	J(3)
4	5/16	40020	W162(3)	4AWG(1)	A4CAB(1)	U4CABT(1)	(1)	Green(2)	Green(2)	-	37(1)	(1)	-	BY53(3)	P(3)
2	3/8	40024	W163(3)	2AWG(1)	A2CAB(1)	U2CABT(1)	(1)	Pink(2)	Pink(2)	-	42H(2)	(1)	-	BY23(3)	1/2(3)
	1/2	40025	W163(3)	2AWG(1)	A2CAB(1)	U2CABT(1)	(1)	Pink(2)	Pink(2)	-	42H(2)	(1)	-	BY23(3)	1/2(3)
1	3/8	40028	W163(3)	1AWG(1)	A1CAR(1)	U1CART(1)	(1)	Gold(2)	Gold(2)	-	45(1)	(1)	-	BY23(3)	1/2(3)
	1/2	40029	W163(3)	1AWG(1)	A1CAR(1)	U1CART(1)	(1)	Gold(2)	Gold(2)	-	45(1)	(1)	-	BY23(3)	1/2(3)
1/0	3/8	40032	W241(3)	1/0(1)	A25AR(1)	U25ART(1)	(1)	Tan(2)	Tan(2)	-	50(1)	(1)	-	BY25(3)	5/8-1(3)
	1/2	40033	W241(3)	1/0(1)	A25AR(1)	U25ART(1)	(1)	Tan(2)	Tan(2)	-	50(1)	(1)	-	BY25(3)	5/8-1(3)
	3/8	40132	W241(3)	1/0(1)	A25AR(1)	U25ART(1)	(1)	Tan(2)	Tan(2)	-	50(1)	(1)	-	BY25(3)	5/8-1(3)
2/0	1/2	40037	BG(4)	2/0(1)	A26AR(2)	U26ART(2)	(1)	Olive(2)	Olive(2)	-	54H(2)	(2)	-	BY31C(3)	5/8-1(3)
	1/2	40137	BG(4)	2/0(1)	A26AR(2)	U26ART(2)	(1)	Olive(2)	Olive(2)	-	54H(2)	(2)	-	BY31C(3)	5/8-1(3)
3/0	1/2	40041	W166(4)	3/0(1)	A27AR(2)	U27ART(2)	(1)	Ruby(2)	Ruby(2)	-	60(2)	(2)	-	-	737(3)
	1/2	40141	W166(4)	3/0(1)	A27AR(2)	U27ART(2)	(1)	Ruby(2)	Ruby(2)	-	60(2)	(2)	-	-	737(3)
4/0	1/2	40045	W660(4)	4/0 (2)	A28AR(2)	U28ART(2)	(1)	-	White(4)	-	66(4)	(2)	-	BY35C(4)	840(4)
	5/8	40046	W660(4)	4/0 (2)	A28AR(2)	U28ART(2)	(1)	-	White(4)	-	66(4)	(2)	-	BY35C(4)	840(4)
	1/2	40145	W660(4)	4/0 (2)	A28AR(2)	U28ART(2)	(1)	-	White(4)	-	66(4)	(2)	-	BY35C(4)	840(4)
250	1/2	40049	W249(3)	-	A29AR(2)	U29ART(2)	(1)	-	-	71H(4)	71H(2)	(3)	-	-	-
	5/8	40050	W249(3)	-	A29AR(2)	U29ART(2)	(1)	-	-	71H(4)	71H(2)	(3)	-	-	-
	1/2	40149	W249(3)	-	A29AR(2)	U29ART(2)	(1)	-	-	71H(4)	71H(2)	(3)	-	-	-
300	1/2	40053	-	-	A30AR(2)	U30ART(2)	(1)	-	-	76H(4)	76H(2)	(3)	-	-	-
	1/2	40153	-	-	A30AR(2)	U30ART(2)	(1)	-	-	76H(4)	76H(2)	(3)	-	-	-
350	1/2	40056	-	-	-	U31ART(2)	(1)	-	-	87H(4)	87H(3)	(3)	-	-	-
	5/8	40057	-	-	-	U31ART(2)	(1)	-	-	87H(4)	87H(3)	(3)	-	-	-
	1/2	40156	-	-	-	U31ART(2)	(1)	-	-	87H(4)	87H(3)	(3)	-	-	-
400	1/2	40160	-	-	-	U32ART(4)	(1)	-	-	94H(4)	94H(4)	-	(2)	-	-
500	5/8	40067	-	-	-	U34ART(4)	(1)	-	-	106H(4)	106H(3)	-	(2)	-	-
	1/2	40166	-	-	-	U34ART(4)	(1)	-	-	106H(4)	106H(3)	-	(2)	-	-
600	1/2	40170	-	-	-	U36ART(4)	(1)	-	-	-	115H(3)	-	(3)	-	-
750	5/8	40073	-	-	-	U39ART(4)	(1)	-	-	-	125H(4)	-	(3)	-	-
	1/2	40172	-	-	-	U39ART(4)	(1)	-	-	-	125H(4)	-	(3)	-	-
1000	5/8	40079	-	-	-	S44ART(4)	(1)	-	-	-	140H(4)	-	(3)	-	-
	1/2	40178	-	-	-	S44ART(4)	(1)	-	-	-	140H(4)	-	(3)	-	-

* Y45 and Y46 accept all Y35 dies ("U" series). For Y45 use PT6515 adapter. For Y46 use PUADP adapter.

** Anderson VC6-3, VC6-FT, VC8C and Burndy Y1000 require no die set.

3M, Scotch and Scotchlok are trademarks of 3M Company.
All other trademarks are property of their respective owners.

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture at the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any direct, indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



Electrical Markets Division

6801 River Place Blvd.
Austin, TX 78726-9000
800.245.3573
Fax 800.245.0329
www.3M.com/electrical

Please Recycle. Printed in USA.
© 3M 2015. All Rights Reserved.
78-8124-4909-4 Rev D