



Motor Lead Pigtail Splice for 1000 volts (or less) cables with one-hole lugs

For two-hole lug connections, use 3M™ Motor Lead Pigtail Splice Kits 5316 thru 5319

Instructions



CSA Certified for
600V or Less

Kit Contents (kit contains 3 splices):

- 3 Lug Covers
- 3 Locking Pins
- 3 Tubes Silicone Grease
- 3 Mastic Sealing Strips



Kit Selection Table

Kit Number	Cable Size Range AWG/kcmil (mm ²)		Cable Insulation O.D. Range in. (mm)	Lug Cover* I.D. in. (mm)	Maximum Bolt Length in. (mm)
	Feeder	Motor Lead			
5302	2 - 1/0 (35 - 60)	4 - 1/0 (25 - 50)	0.34 - 0.54 (9 - 14)	0.95 (24)	3/4 (19)
5303	1/0 - 250 (70 - 120)	2 - 250 (35 - 120)	0.40 - 0.80 (10 - 20)	1.20 (30)	1-1/4 (32)
5304	250 - 500 (150 - 240)	4/0 - 500 (120 - 240)	0.67 - 1.05 (17 - 27)	1.70 (43)	1-1/2 (38)

* Lug cover I.D. - use when calculating kit sizing for a connection of more than two conductors (e.g. 3-way, 4-way, etc. Use of one-hole stacking lugs is recommended.)

Table 1

Technical Information:

For use on Non-Shielded Cables 1000 Volts
(or less) with one-hole lugs.

Cable Size Range:

Feeder: 2 AWG-500 kcmil

Motor Lead: 4 AWG-500 kcmil

Copper Conductors

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.

3M™ Motor Lead Pigtail Splice Kits

for 1000 Volts (or less)

5302, 5303, 5304

78-8126-5500-5-C

A. Prepare Cables According to Standard Procedures

1. Check to be sure cable sizes fit within the kit range as shown in Table 1.
2. Remove cable insulation for length recommended by terminal lug manufacturer; if no information is available, remove for depth of lug barrel.

Note: *If a split bolt connector is used, refer to Table 2 below for maximum split bolt size for each kit.*

Kit No.	Max. Split Bolt Size
5302	4 AWG
5303	2 AWG
5304	250 kcmil

Table 2

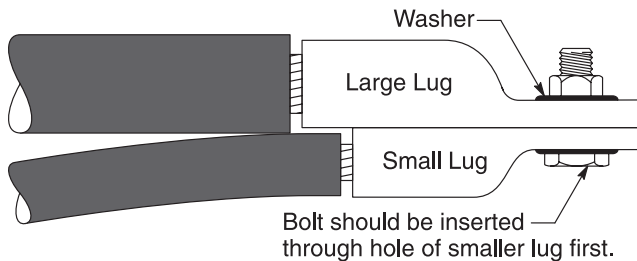


Figure 1

For Jacketed Feeder Cable Only:

If jacketed feeder cable is used, remove an additional 1/2" (13 mm) of jacket, leaving 1/2" (13 mm) of cable insulation exposed (Figure 2).

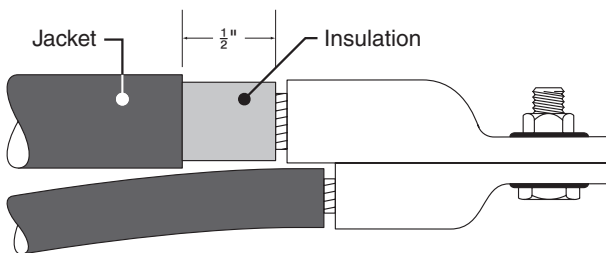


Figure 2

B. Install Lugs

1. Install and crimp lugs per manufacturer's direction. (See back page if 3M™ Scotchlok™ Copper Lugs are used.)
2. Clean insulation (or jacket as applicable) for approximately 6" (152 mm).
3. Bolt lugs together. See Table 1 for maximum bolt length, and Figure 1 for proper bolt/lug arrangement.

C. Installation

Note: *If moisture resistance is not required, proceed to Step 4.*

1. To gauge mastic build up in next step, temporarily install lug cover over bolted lugs, leaving 1/2" (13 mm) of lug exposed.

Note: *Position lug cover so punched holes are positioned between the two conductors (Figure 3).*

2. Separate the cables and apply mastic strip around insulation and between them at a position just onto insulation (Figure 3). *For jacketed feeder cable, see note below.* Build thickness so the overall diameter is slightly larger than the observed inside diameter of the lug cover. Press cables together and be sure that no

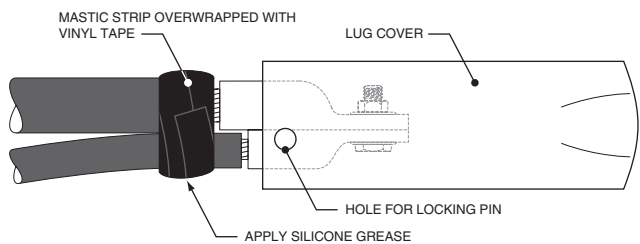


Figure 3

For Jacketed Feeder Cable Only:

For jacketed feeder cable, center mastic strip over cut-back edge of cable jacket, so that it seals onto both the cable jacket and insulation (Figure 4).

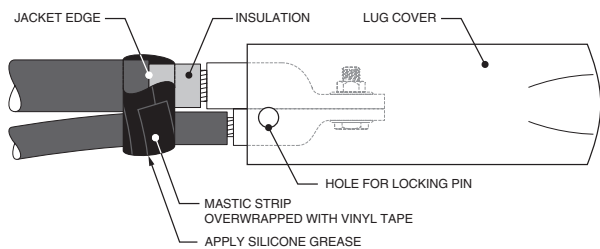


Figure 4

void exists between them.

3. Overwrap the mastic with 1 or 2 wraps of vinyl tape.
4. Install lug cover.

Note: *The kit contains a small tube of silicone grease. Use it to lightly lubricate the mastic-vinyl wrap. This will aid in installing the lug cover (Figure 3 or 4, as applicable).*

5. Be sure the locking pin (punched) holes are beyond the cable end of the mastic-vinyl wrap. Insert plastic locking pin through holes. *HINT: Inserting pin from the blind (back) side of lug cover will aid in visually seeing the pinpoint for proper alignment through the second hole (Figure 5).*
6. Cut off excess pin length, if desired. Must leave 1/4" (6 mm) extended out of cap.

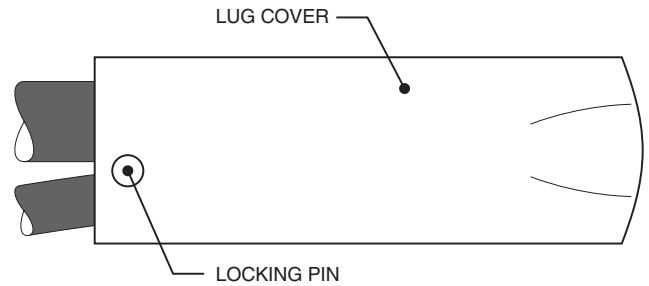


Figure 5

Lug and Crimping Information for 3M™ Scotchlok™ Copper Lugs

30018 thru 31067
One hole



5.0 Copper Lugs

Cable Size	Stud Size	Scotchlok™ Copper Lug Number	CRIMPING TOOL-DIE SETS (NO. OF CRIMPS)							
			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**
4	10 1/4 3/8	30018 30019 30021	W161(1)	4 AWG(1)	A4CR(1)	U4CRT(1)	Blue(1)	Grey(1)	--	Universal(1)
2	1/4 5/16 3/8	30022 30023 30024	W162(2)	2 AWG(1)	A2CR(1)	U2CRT(2)	Grey(1)	Brown(1)	33(1)	Universal(2)
1	5/16 3/8	30027 30028	--	1 AWG(1)	A1CR(1)	U1CRT(2)	Green(1)	Green(1)	37(1)	Universal(2)
1/0	3/8	30031 30032	W163(2)	1/0(1)	A25R(1)	U25RT(1)	Pink(2)	Pink(2)	42H(2)	Universal(1)
2/0	1/2	30036	W241(2)	2/0(1)	A26R(1)	U26RT(2)	Black(2)	Black(2)	45(1)	Universal(1)
3/0	1/2	30041	W243(2)	3/0(1)	A27R(1)	U27RT(2)	Orange(2)	Orange(2)	50(1)	Universal(2)
4/0	1/2	30045	BG(3)	4/0(1)	A28R(2)	U28RT(2)	Purple(2)	Purple(2)	54H(2)	Universal(2)
250	1/2	31049	W166(4)	250(2)	A29R(2)	U29RT(3)	Yellow(2)	Yellow(2)	62(2)	Universal(2)
300	1/2	31053	--	--	A30R(2)	U30RT(3)	--	White(3)	66(3)	Universal(3)
350	1/2	31056	--	--	A31R(2)	U31RT(3)	--	Red(4)	71H(4)	--
400	1/2	31060	--	--	A32R(2)	U32RT(3)	--	Blue(4)	76H(4)	--
500	1/2 5/8	31066 31067	--	--	A34R(2)	U34RT(3)	--	Brown(4)	87H(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 and Burdny Y1000 require no die set.

Appendix A

Splice Removal

1. Remove Locking Pin from Lug Cover.
2. Slide Lug Cover off of lugged or split-bolt connection.
3. If splice was sealed for moisture resistance: Remove Mastic and Vinyl Tape Seal from cables.
4. Remove nut and bolt (or split-bolt) to separate the motor lead from the feeder cable(s).

CAUTION

Be careful not to damage cables.

Appendix B

Splice Reusability

1. First inspect the removed Lug Cover and Locking Pin for damage or wear. Replace with a new splice if evidence of damage or wear is found.
2. Obtain material to replace the non-reusable splice components.
3. Re-Install the splice according to the standard kit instructions.

Reusable Components

- Lug Cover
- Locking Pin

Replacement Components

These are standard 3M products, available from 3M Electrical Markets Division.

- 3M™ Scotch-Seal™ Mastic Strip 2230 (UPC 054007-41813), 5/8" x 6", 40/case
- SIL-5cc Silicone Grease (UPC 054007-41814), 5-cc-Tube
- Scotch® Super 33+™ Vinyl Electrical Tape (UPC 054007-06132), 3/4" x 66'
- 3M Pin-Lug Cover, 2" Lg. (78-8041-7208-4, special order)

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Electrical Markets Division

6801 River Place Blvd.
Austin, TX 78726-9000
800-245-3573
Fax 800-245-0329
www.3M.com/electrical

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