

TERMINALS AND SPLICES, NON-INSULATED SOLDERLESS TYPE**1. Scope**

This standard covers the requirements for non-insulated, standard and heavy-duty, ring terminals and butt splices.

Stock Number	Wire Size Range, AWG	Stud Size, Stud #/in
<i>standard duty, ring terminal</i>		
677141	#22-#18	#10
677144	#16-#14	#10
667145	#16-#14	1/4
677159	#12-#10	#10
677161	#12-#10	1/4
<i>heavy duty, ring terminal</i>		
677169	#10-#9	#10
013515	#12-#10	#10
677189	#12-#10	1/2
677187	#6	1/2
677193	#4	5/8
677188	#2	5/8
<i>standard duty, butt splice</i>		
677390	#22-#18	-
677391	#16-#14	-
677425	#12-#10	-

2. Application

Ring terminals are installed on the ends of low voltage conductors and secured with a hand-operated crimping tool. Design provides a low cost, reliable electrical connection.

Non-insulated terminals and splices do not have a voltage or temperature rating.

Non-insulated terminals and splices are not appropriate for direct burial, where strain relief is required, or where long-term vibration may occur. If wire strain relief or vibration resistance is required, use insulated terminals, Material Standard 6771.30. If a greater selection is desired, insulated terminals may be substituted for non-insulated ones.

3. Industry Standards

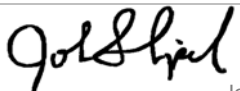
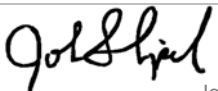

Terminals and splices shall meet the applicable requirements of the following industry standard:

ANSI/UL 486A-486B; Wire Connectors

4. Attributes

Terminals and splices shall have the following attributes and ratings and conform to the requirements cited in section 11:

- straight receptacle style
- chamfered/funneled terminal entry
- deep serrated barrel interior
- brazed or overlap seam
- pure copper body
- electroplated-tin finish
- EU RoHS/ELV compliant

standards coordinator	standards supervisor	unit director
 John Shipek	 John Shipek	 Darnell Cole

MATERIAL STANDARD

Terminals and Splices, Non-Insulated Solderless Type

standard number: **6771.20**
 superseding: November 4, 2011
 effective date: October 16, 2013
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4. Attributes, continued

Terminal tongue thickness,
nominal, in

wire size

#22 to #14	0.03
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#12 to #10	0.04
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#6	0.06
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#4 to #2	0.07
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Stud #, equivalent diameter, in

#10	0.190
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Terminals and splices shall be free from sharp edges and degreased prior to plating.

5. Tests and Test Reports

Data that establishes compliance with the requirements of ANSI/UL 486A-486B and this material standard shall be provided upon request.

6. Product Approval

Manufacturers interested in having their product approved for purchase by Seattle City Light must participate in a stepped evaluation process. Contact Standards for the details.

7. Marking

Each terminal and splice shall be permanently and legibly marked with:

- Manufacturer's name or symbol
- Wire size/range

8. Packaging

Terminals and splices shall be packaged to prevent damage during shipping, handling, and inside storage.

Individual packages shall be legibly marked with:

- Manufacturer's name
- Manufacturer's catalog number
- Product description
- Quantity contained
- Seattle City Light's Stock Number

Standard package quantity shall be 50, 100, 500, or 1000 units, as determined by the manufacturer's approved catalog number, purchase order, or mutual agreement.

9. Issuance

Stock Unit: EA

10. References

6771.30: "Terminals and Splices, Insulated, Solderless Type"; Material Standard; SCL

AMP SOLISTRAND; *Budget and DIAMOND GRIP Uninsulated Terminals and Splices*; Catalog 65505; revised 09-00

Burndy Master Catalog; *Solutions for the Electrical Industry*; circa 2011

Shipek, John; SCL standards engineer, subject matter expert, and originator of 6771.20; (john.shipek@seattle.gov)

SCL Drawing D-44327, *Wiring Method Specification*, Revision 4

Thomas & Betts Electrical Components; *Products and Systems*; Volume 1; effective January 2003

www.burndy.com

www.tnb.com

11. Approved Manufacturers**11.1 General**

Refer to the following sub sections for approved catalog numbers.

- TE Connectivity AMP (formerly Tyco Electronics AMP), abbreviated **AMP**, SOLISTRAND series
- **Burndy** (a division of Hubbell), HYLUG and HYLINK series
- Thomas & Betts, abbreviated **T&B**, Sta-Kon series

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11. Approved Manufacturers, continued**11.2 Ring Terminals**

Stock Number	Wire Size Range, AWG	Stud Size, Stud # / in	Duty	Manufacturer and Catalog Number		
				AMP	Burndy	T&B
677141	#22 - #18	#10	standard	34109	T18-10	A18-10
677144	#16 - #14	#10	standard	34123	T14-10	B14-10
667145	#16 - #14	1/4	standard	34124	T14-14	B14-14
677159	#12 - #10	#10	standard	35771	T10-10	C10-10
677161	#12 - #10	1/4	standard	35772	T10-14	C10-14
677169	#10 - #9	#10	heavy	-	YAV9C-L36 BOX	-
013515	#12 - #10	#10	heavy	-	YAV10-L36 BOX	-
677189	#12 - #10	1/2	heavy	35135	-	C10-12
677187	#6	1/2	heavy	320344	-	E6-12 or E75
677193	#4	5/8	heavy	35669	-	-
677188	#2	5/8	heavy	320754	-	-

11.3 Butt Splices

Stock Number	Wire Size Range, AWG	Duty	Manufacturer and Catalog Number		
			AMP	Burndy	T&B
677390	#22 - #18	standard	31818	YSV18	2A18
677391	#16 - #14	standard	31819	YSV14	2B14
677425	#12 - #10	standard	32151	YSV10	2C10