Grounding Connectors, Clamp and Ball Ground

1. Scope

This standard covers the requirements for clamp and ball ground, grounding connectors, including ball-socket grounding system, clamps, ferrules, and grounding cables.

This standard applies to the Seattle City Light (SCL) stock numbers cited in Section 8.

2. Application

Grounding connectors are used to construct personal protective grounds used by Operating personnel on the transmission and distribution systems.

Ball and socket grounding systems are rated) at 30 kA for 30 cycles. At locations where the fault duty exceeds this value, the ground systems must be used in parallel, if they are to be used at all. Use only copper ferrules with copper or bronze clamps.

3. Industry Standards

Grounding connectors shall meet the applicable requirements of the latest revision of the following industry standard:

ASTM F855, Standard Specifications for Temporary Protective Grounds to Be Used on De-energized Electric Power Lines and Equipment

4. Testing

High-current testing shall take place at the BPA test lab in Vancouver, Washington.

Test data that establishes compliance with the requirements of this standard shall be provided upon request.

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5. Marking

Grounding connectors shall be legibly and permanently marked with the following:

- ▪ Manufacturer name or trademark
- ▪ Catalog number
- ▪ Conductor size

6. Packaging

Product shall be packaged to prevent damage during shipping, handling, and storage.

Each standard package shall be legibly marked with the following information:

- Manufacturer identification
- Product description
- SCL stock number
- Quantity

Each shipping container shall be legibly marked with the following information:

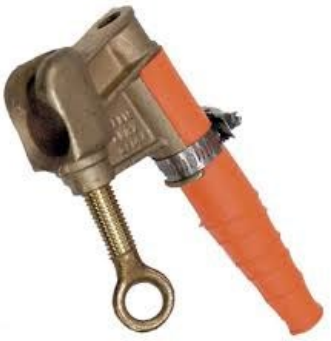
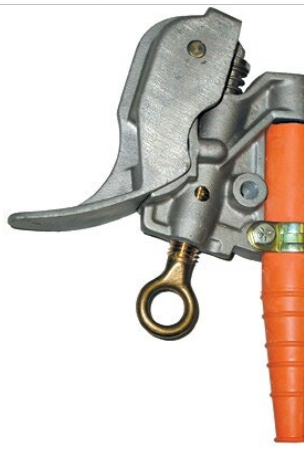
- SCL purchase order number

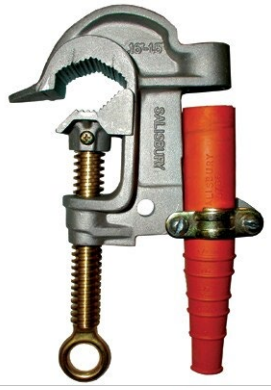
7. Issuance

Stock No.	Issuance
650210	EA
650215	EA
650220	EA
650205	EA
650212	EA
650225	EA
650230	EA
650235	PR
650240	PR
650245	PR
615500	FT
615505	FT

8. Approved Manufacturers

No substitutions. Salisbury only.

Stock No.	Description	Salisbury Product No.	
650210	Ball socket clamp, copper alloy, ASTM Grade 5, 1” socket, with strain relief, for 5/8” -11 threaded ferrule	21190	
650215	Ball stud, short, copper alloy, 1” ball, tin-plated, 4-3/8” long with 1/2”-13 UNC x 2” thread	21191	
650220	Ball stud, long, copper alloy, 1” ball, 6-1/8” long with 1/2”-13 UNC x 2” thread, tine-plated, For use with ball socket clamp of 2-3/4” or less wide copper duckbill clamp.	21192	
650225	Ball stud, copper alloy, 1” ball, offset, Tin-Plated, with 2-hole NEMA pad, 5-1/8” x 1-1/2”	21228	
650230	Cover, orange SALCOR, For 1” ball stud.	21236	
650205	Grounding clamp, ASTM Grade 5, aluminum, 1.66” wide, serrated jaw with strain relief sleeve, Continuous current Rating: 400 AMP, “Duck Bill”, spring loaded, use with 650245 and 615500	1853	

Stock No.	Description	Salisbury Product No.	
650212	Grounding clamp, ASTM Grade 5, aluminum, “C” type, 1.5” wide, serrated jaw, with strain relief sleeve. Salisbury Catalog No. 1895 is an acceptable substitute if No. 1893 is not available	1893 and 1895	
650235	Ferrule, copper, ASTM Grade 3, For 2/0 grounding cable, with 5/8-11 threaded stud	2024	
650240	Ferrule, copper, ASTM Grad 5, For 4/0 grounding cable, with 5/8-11 threaded stud	2025	
650245	Ferrule, aluminum, ASTM Grade 5, For 4/0 grounding cable, with 5/8-11 threaded stud	2640	

Stock No.	Description	Salisbury Product No.	
615500	Cable, grounding, #4/0 Cu., soft drawn, 2000 or more strands, yellow thermoplastic elastomer jacketed, ASTM F855 Type I	2139	
615505	Cable, grounding, #4/0 Cu. soft drawn, 2000 or more strands, clear flexible thermoplastic (PVC) jacketed, ASTM F855 Type III	2288	

9. Sources

SCL Stock Catalog Page 65-26; February 23, 2004

SCL Work Practice 0056.35; Personal Protective Grounding of Overhead Distribution Lines, (April 10, 2015)

SCL Work Practice 0056.45; Personal Protective Ground of Overheard Transmission Lines, (February 3, 2017)

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