

Connectors, Ground Grid, Wedge, Shear-Bolt



1. Scope

This standard covers the requirements for shear-bolt, wedge, ground grid connectors.

This standard applies to the following Seattle City Light (SCL) stock numbers:

Stock No.	Cable Size (AWG/kcmil)	
	Run A	Run B
677510	4/0	4/0
677514	350	350
677512	500	500

2. Application

Connectors are used to create an irreversible connection between conductor to conductor or conductor to ground rod in substation ground grids.

Connectors are installed with a common ratchet or socket wrench. When the connection is tightened to the proper torque, the bolt head shears off, giving a positive visual indication of a completed connection.

3. Industry Standards

Connectors shall meet the applicable requirements of the latest revision of the following industry standards:

ANSI C119.4, American National Standard for Electric Connectors— Connectors for Use between Aluminum-to-Aluminum and Aluminum-to-Copper Conductors Designed for

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Normal Operation at or Below 93°C and Copper-to-Copper Conductors Designed for Normal Operation at or Below 100°C

IEEE 837 – Standard for Qualifying Permanent connections Used in Substation Grounding

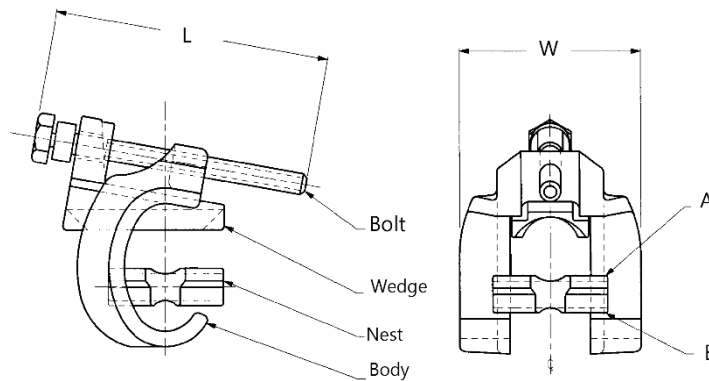
4. Requirements

Connector consists of a shear-head bolt, a wedge, a body and nest.

Connectors shall have the following attributes:

- Made of bronze
- Shear-head bolt design
- Physical design according to Figure 4.

Figure 4. Connector Components



5. Marking

Connectors shall be legibly marked with the following:

- Manufacturer name or trademark
- Catalog number
- Conductor size

6. Packaging

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

Packages shall be legibly marked with the following information:

- Manufacturer identification
- Product catalog part number
- Product description
- SCL stock number

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

- SCL purchase order number

7. Issuance

Stock unit: EA

8. Approved Manufacturers

Stock No.	TE CONNECTIVITY "WRENCH-LOK"
677510	83748-1
677514	83751-3
677512	83750-6

9. Sources

AMP, Connector, Symmetrical Nest, Small, Grounding Grid, Drawing No. 83748,
REV PER 2000-040-94, April 27, 1994

AMP, Connector, Symmetrical Nest, Large, Grounding Grid, Drawing No. 837450,
REV PER 2000-040-94, April 27, 1994

AMP, Connector, Asymmetrical Nest, Large, Grounding Grid, Drawing No. 83751,
REV PER LC00-0046-95, May 16, 1995

AMP, Wrench-Lok Grounding Connectors, Instruction Sheet 408-9504, Rev A,
November 22, 1995

SCL Stock Catalog Page 65-23, February 2, 2017

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