# Lugs, 90-Degree, Two-Hole, Tin-Plated Aluminum

## 1. Scope

This standard covers the requirements for tin-plated aluminum, two-hole, 90-degree lugs.

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

| Stock No. | Conductor Size (kcmil) |
|---|---|
| 012262 | 500 |
| 651324 | 750 |

## 2. Application

90-degree lugs are intended for terminating aluminum or copper secondary cables to an aluminum or copper surface at a 90-degree angle.

## 3. Industry Standards

90-degree lugs shall meet the 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 Normal Operation at or Below 93°C and Copper-to-Copper Conductors Designed for Normal Operation at or Below 100°C*

**ANSI/NEMA CC1;** Electric Power Connection for Substations

## 4. Requirements

90-degree lugs shall have the following attributes:

- Aluminum construction
- Tin-plated finish
- Design and dimensions as shown Table 4 and Figure 4.
- Two-hole NEMA pad forming a 90-degree bend from the barrel
- Lug terminal barrels factory-filled with a measured amount of high-voltage oxide-inhibiting compound
- Sealed terminal ends to prevent leakage or contamination of the inhibiting compound

**Figure 4. 90-Degree Lug Dimensions**

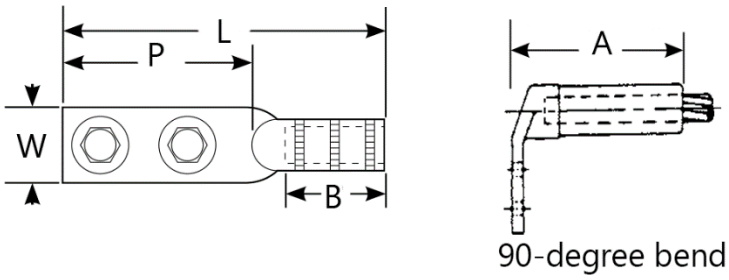


**Table 4. 90-Degree Lug Dimensions (in)**

| Stock No. | Conductor Size (kcmil) | Lug Length, Straight Segment (L) | Lug Length 90-Degree Bend Segment (A) | Barrel Length (B), min. | Pad Length (P), min. | Pad Width (W) | Stud Size | Cap Color |
|---|---|---|---|---|---|---|---|---|
| 012262 | 500 | 8 | 4-1/2 | 2-15/16 | 3 | 1-3/4 | 1/2 | Pink |
| 651324 | 750 | 8.5 | 5-3/8 | 3-5/16 | 3 | 1-3/4 | 1/2 | Red |

## 5. Markings

90-degree lugs shall be legibly marked with the following:

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

## 6. Packaging

90-degree lugs 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:

- Seattle City Light purchase order number

## 7. Issuance

EA

## 8. Approved Manufacturers

| Stock No. | Conductor Size (kcmil) | ABB / Thomas & Betts / Blackburn |
|---|---|---|
| 012262 | 500 | AL500-NTN-90 |
| 651324 | 750 | AL750-NTN-90 |

## 9. Sources

**SCL Material Standard 6774.12**; "Connectors, Terminal, Aluminum Compression, Stacking and Non-Stacking"

**Stock Catalog Page 65-10**; February 5, 2004

**Thomas & Betts Safety Data Sheet (SDS)**; Global SDS-00041-TB2

**www.ABB.com**

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