

## Connectors, Multiple, Insulated Submersible, 550 A and Accessories



### 1. Scope

This standard covers the requirements for 550 A insulated submersible multiple connectors. This standard applies to the following Seattle City Light (SCL) stock numbers:

| Stock No. | Description  |
|-----------|--|
| 678800    | 3-position connector without streetlight tap, large-bolt terminals |
| 678703    | 3-position connector without streetlight tap, small-bolt terminals |
| 678707    | 4-position connector with streetlight tap                          |
| 678713    | 6-position connector with streetlight tap                          |
| 678715    | 8-position connector with streetlight tap                          |
| 678620    | Insulating sleeve  |
| 678663    | Streetlight tap cover  |

650 A insulated submersible multiple connectors are outside the scope of this standard. See SCL 6780.20.

Two-sided, 1000 A insulated submersible multiple connectors are outside the scope of this standard. See SCL 6780.30

### 2. Application

Connectors are designed for use in pedestal, vault, and handhole or direct bury applications.

Ampacity of the connector cited is based on the nominal rating ampacity of the crossbar at 75 degrees C. Ultimate ampacity can vary as a result of many factors, including loading of the cable, what the connector or bus is connected to, and the connection sequence of the cables.

Standards Coordinator  
Laura Vanderpool

Standards Supervisor  
John Shipek

Division Director  
Andrew Strong

### 3. Industry Standards

Connectors shall meet the applicable requirements of the following industry standard:

**ANSI C119.4**, "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"

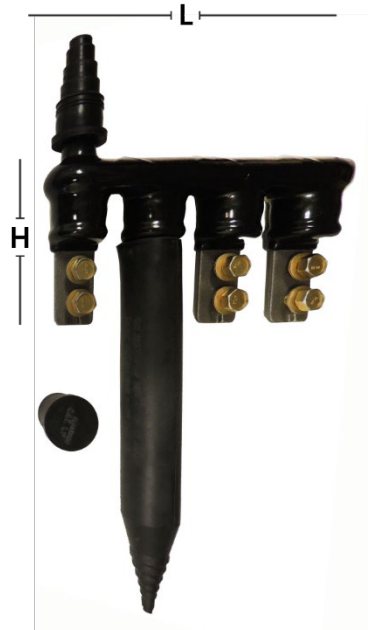
### 4. Requirements

#### 4.1 Material

Connectors shall be made of cast aluminum and insulated with cross-linked polyethylene (XLP), or with polyvinyl chloride (PVC) with a minimum insulation thickness of 80 mils.

Accessories (insulating sleeve, plug sleeve, tap cover) shall be made of ethylene propylene diene monomer (EPDM) rubber.

**Figure 4.1. Connector with Accessories**



#### 4.2 Dimensions

**Table 4.2. Connector Dimensions**

| Stock No. | Positions | Length, max (in) | Height, min (in) |
|-----------|-----------|------------------|------------------|
| 678800    | 3         | 9.4              | 4.3              |
| 678703    | 3         | 6.5              | 5.2              |
| 678707    | 4         | 8.8              | 4.3              |
| 678713    | 6         | 12.4             | 4.3              |
| 678715    | 8         | 16.6             | 4.3              |

#### 4.3 Bus Terminals

Bus terminals shall be supplied with 3/8-in diameter hex head cap screws and a captive Belleville washer.

#### 4.4 Insulating Sleeves

Insulating sleeves shall have a nominal length of 10-1/2 inches.

**Figure 4.4. Insulating Sleeve**



#### 4.5 Streetlight Tap Covers

Streetlight tap covers shall have a nominal height of 2-1/2 inches.

**Figure 4.5. Streetlight Tap Cover**



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### 5. Packaging

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

- Manufacturer identification
- Product description
- Seattle City Light stock number
- Quantity contained

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

- Manufacturer identification
- Product description
- Seattle City Light purchase order number

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### 6. Issuance

Stock Unit: EA

## 7. Approved Manufacturers

| Stock No. | Description  | ABB / Thomas & Betts (Blackburn) | ABB / Thomas & Betts (Homac) | Hubbell Power Systems (CMC/ESP) |
|-----------|--|----------------------------------|------------------------------|---------------------------------|
| 678703    | 3-position connector without streetlight tap, small-bolt terminals | USL30                            | –                            | –                               |
| 678800    | 3-position connector without streetlight tap, large-bolt terminals | UPC33                            | –                            | UC33                            |
| 678707    | 4-position connector with streetlight tap                          | UPC44SL                          | –                            | UC-44SL                         |
| 678713    | 6-position connector with streetlight tap                          | UPC66SL                          | –                            | UC-66-SL                        |
| 678715    | 8-position connector with streetlight tap                          | UPC88SL                          | –                            | UC-88-SL                        |
| 678620    | Insulating sleeve  | –                                | CSN2011                      | T-L                             |
| 678663    | Streetlight tap cover  | –                                | –                            | Cap-1                           |

**Note:** "SL" in the manufacturer catalog number indicates that the product includes a streetlight tap.

## 8. References

**SCL Material Standard 6780.20;** "Connectors, Multiple, Insulated Submersible, 650 A and Accessories

**SCL Material Standard 6780.30;** ""Connectors, Multiple, Insulated Submersible, 1000 A, Two-Sided"

## 9. Sources

**Chao, Yao,** SCL Electrical Engineer and subject matter expert for 6780.05.

**SCL Material Standard 6786.2** (canceled); "Insulating Sleeves, Covers, and Plugs for Submersible Multiple Connectors"

**SCL Material Standard 6780.0** (canceled); "Connectors, Multiple, Insulated, Submersible, Rated 1000 Amp"

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