

Separable Connector, Deadbreak, Dielectric Components, 125 kV BIL



1. Scope

This standard covers the requirements for 125 kV BIL, deadbreak, separable connector dielectric components. Separable connector dielectric components consist of T-bodies, and cable adapters.

The requirements for 125 kV BIL, deadbreak, straight line apparatus connector kits are specified in SCL 6863.16.

The requirements for 600 A and 900 A compression connectors are specified in SCL 6863.10 and 6863.30 respectively.

The requirements for 125 kV BIL, 600 A and 900 A junction boxes, plugs, miscellaneous components and tools, and accessories are specified in SCL 6863.17 and 6863.37 respectively.

The requirements for 150 kV BIL, deadbreak, separable connector dielectric components are specified in SCL 6863.25.

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

Stock No.	Description	Cable Insulation OD Minimum Range (in)
686350	T-body	–
686310	Cable adapter	0.640-0.820
686315	Cable adapter	0.760-0.950
686370	Cable adapter	0.850-1.050
686361	Cable adapter	0.980-1.180
686365	Cable adapter	1.090-1.310
686352	Cable adapter	1.180-1.465
686348	Cable adapter	1.370-1.630
686372	Cable adapter	1.515-1.780
010137	Cable adapter	1.725-1.935

2. Application

A separable connector (elbow) is a fully insulated and shielded system for terminating and electrically connecting an insulated power cable to electrical apparatus, other power cables, or both, so designed that the electrical connection can be readily established or broken by engaging or separating the connector at the operating interface.

The separable connectors specified in this material standard are intended for use on the following three-phase, 60 Hz systems:

- 13.8 kV, 3-wire, delta, where load consists of network type transformers with delta-connected primary and grounded wye-connected secondary
- 26.4 kV, 4-wire, solidly-grounded, wye-connected.

125 kV BIL T-bodies, and cable adapters **cannot** be used interchangeably with 150 kV BIL dielectric components. New construction should utilize 125 kV BIL material, except in cases where the equipment being connected to has 150 kV BIL bushings.

600 A and 900 A compression connectors can be used to make up either 125 kV BIL or 150 kV BIL separable connectors. Dielectric components alone do not have a current rating.

Because of high fault duty, connectors rated 200 A continuous are not appropriate for network systems. Network systems should be constructed with connectors rated 600 A (or 900 A) continuous.

For cable technical data, refer to SCL 9660.04.

For cable specific information relating to the parts required to make-up a complete separable connector, including jacket sealing and metallic shield adapters, refer to U5-17.05.

3. Industry Standards

Separable connector dielectric components shall meet the applicable requirements of the following industry standard:

IEEE 386-2006 – Standard for Separable Insulated Connector Systems for Power Distribution Systems Above 600 V

4. Detailed Requirements

Separable connector dielectric components shall have the following electrical ratings and attributes:

Voltage class	25 kV
Maximum voltage rating (ph-g)	8.3 kV RMS (delta systems)
	15.2 kV RMS (grounded wye systems)
BIL	125 kV crest
Continuous current rating	600 A RMS (with all-aluminum compression connector)
	900 A RMS (with all-copper compression connector)
Short-time current rating	25 kA RMS, symmetrical
IEEE 386 interface	Figure 11

Each separable connector T-body shall be provided with assembly instructions.

Cable adapters shall be designed and fabricated for use with the 125 kV BIL T-body specified in this standard.

5. Testing

Separable connector dielectric components shall be tested according to the requirements of IEEE 386, Section 7.

Test results shall be provided upon request.

6. Design Changes

Manufacturer shall inform Seattle City Light in writing of all design changes that could affect the product's understood or published capabilities.

7. Marking

Separable connector dielectric components shall be marked according to the requirements of IEEE 386, Section 6.1.

8. Packaging

Separable connector dielectric components shall be packaged to prevent damage and/or contamination during shipping, handling, and storage.

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

- Manufacturer's identification
- Product description
- Quantity contained
- Seattle City Light's purchase order number
- Seattle City Light's stock number.

Shipping container weight shall not exceed 50 pounds.

9. Issuance

EA

10. Approved Manufacturers

Stock No.	Description	Cable Insulation OD Minimum Range (in)	Manufacturer Catalog No.		
			Cooper Power Systems	Richards Manufacturing Co.	Thomas & Betts (Elastimold)
686350	T-body	-	DT625	62LCN0	K655BLRN
686310	Cable adapter	0.640-0.820	CA625AB	P625CA-F	655CA-F
686315	Cable adapter	0.760-0.950	CA625CC	P625CA-G	655CA-G
686370	Cable adapter	0.850-1.050	CA625CC	P625CA-H	655CA-H
686361	Cable adapter	0.980-1.180	CA625DD	P625CA-J	655CA-J
686365	Cable adapter	1.090-1.310	CA625EE	P625CA-K	655CA-K
686352	Cable adapter	1.180-1.465	CA625EE	P625CA-L	655CA-L
686348	Cable adapter	1.370-1.630	CA625GG	P625CA-M	655CA-M
686372	Cable adapter	1.515-1.780	CA625HH	P625CA-N	655CA-N
010137	Cable adapter	1.725-1.935	CA625JJ	P625CA-P	655CA-P

11. References

SCL Construction Guideline U5-17.05; "Separable Connector (T-Body), 125 kV BIL, Deadbreak"

SCL Design Standard 9660.04; "Properties of Medium Voltage Cables"

SCL Material Standard 6863.10; "Compression Connectors, All-Aluminum Type"

SCL Material Standard 6863.16; "Separable Connector, Deadbreak, Straight Line Apparatus Connector Kits, 125 kV BIL"

SCL Material Standard 6863.17; "Separable Connector Accessories, 125 kV BIL, 600 A"

SCL Material Standard 6863.25; "Separable Connector, Deadbreak, Dielectric Components, 150 kV BIL"

SCL Material Standard 6863.30; "Compression Connectors, All-Copper Type"

SCL Material Standard 6863.37; "Separable Connector Accessories, 125 kV BIL, 900 A"

12. Sources

B100-02024; "Components Master Catalog, 5 kV-35 kV Electrical Distribution Systems, Specifiers Guide," Cooper Power Systems

PG-CA-0506; "Cable Accessories for 5 kV-35 kV Distribution Systems, Product Selection Guide"; Thomas & Betts (Elastimold)

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