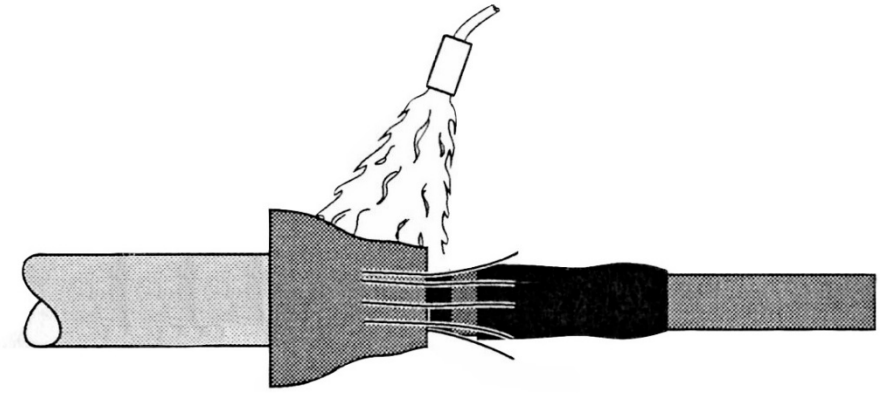
Shim Kits, Heat-Shrink Splice, 110 kV BIL



1. Scope

This standard covers the requirements for 110 kV BIL, heat-shrink splice shim kits for cable splices. Cable splices are also known as cable joints.

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

Stock No.	Item	Cable Insulation Diameter Range (in)
687551	Shim kit	0.60-1.05
687553	Shim kit	0.90-1.50
687554	Shim kit	0.70-1.15

2. Application

Shim kits are used to increase the insulation diameter of polymeric cable, allowing it to fit in the use range of a standard splice kit. The shim kit may be used for 1/C copper, tape, LC shield, wire shield, lead sheath, jacketed and unjacketed concentric neutral cables.

To determine the correct shim kit to use, select the shim kit that fills the larger of the two cables within the kit insulation diameter use range. If the large cable fits in more than one kit, use the smaller kit. Determine the minimum cable insulation diameter for the kit and find that in the first column of Table 4. In the second column, find the insulation diameter range in which the smaller cable falls. The correct shim kit to use will be in the third column.

Shim kits do not contain connectors. If needed, order size reducing connector separately.

3. Industry Standards

Shim kits shall meet the requirements of the latest revision of the following industry standard:

IEEE 404-2012 Standard for Extruded and Laminated Dielectric Shielded Cable Joints 2.5 kV to 500 kV

4. Requirements

Voltage Class	5-35 kV
Basic impulse insulation level (BIL)	110 kV BIL

Splice shim kits shall meet the requirements described in Table 4.

Table 4. Kit Size-to-Cable Cross-Reference

Kit Minimum Insulation Diameter (in)	Smaller Cable Insulation Diameter (in)	Use Shim Kit No.
0.80	0.60-0.80	HVS-SHIM-1
0.85	0.65-0.85	"
0.90	0.70-0.90	"
0.95	0.80-0.95	"
1.00	0.85-1.00	"
1.05	0.90-1.05	"
1.10	0.90-1.10	HVS-SHIM-3
1.15	0.95-1.15	"
1.20	1.00-1.20	"
1.25	1.10-1.25	"
1.30	1.15-1.30	"
1.35	1.20-1.35	"
1.40	1.25-1.40	"
1.45	1.30-1.45	"
1.50	1.35-1.50	"
1.10	0.70-0.90	HVS-SHIM-4
1.15	0.80-0.95	"
1.20	0.85-1.00	"
1.25	0.95-1.10	"
1.30	1.00-1.15	"

Each shim kit will typically include the items shown in Figure 4. Quantities of some components may vary with kit size.

Figure 4. Parts Included in Shim Kits (Typical)

5. Testing

Shim kits shall be tested according to the requirements of IEEE 404, sections 7 and 8.

Test results shall be provided upon request.

6. Design Changes

Manufacturer shall inform SCL in writing of all design changes that could affect the understood or published performance of the product.

7. Marking

Shim kits shall be marked according to the requirements of IEEE 404, Section 6.1. This shall include but not be limited to:

- Company name or logo
- Part identification
- Date of manufacture (month and year)
- “Use Before” date and storage conditions, if applicable
- Maximum phase-to-phase or phase-to-ground voltage rating
- Cable insulation diameter range

8. Packaging

Shim kits shall be individually packaged to prevent damage during shipping, handling and indoor storage.

Each individual package shall constitute a complete kit.

Individual packages shall be marked with:

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

9. Issuance

Stock Unit: EA

10. Approved Manufacturer

Name: TE Connectivity (Raychem)
Product description: Heat-shrink cable splice shim kit

Stock No.	Item	Cable Insulation Diameter Range (in)	Catalog No.
687551	Shim kit	0.60-1.05	HVS-SHIM-1
687553	Shim kit	0.90-1.50	HVS-SHIM-3
687554	Shim kit	0.70-1.15	HVS-SHIM-4

11. Sources

TE Connectivity (Raychem); www.te.com

TE Connectivity (Raychem) Product Installation Instructions HVSH-MOD 15kV Class; Splice for Extruded Dielectric (Poly/EPR) Power Cables: Metallic Tape, Wire Shield, Lead Sheath or UniShield® Cables; Raychem Corporation; Electrical Products Division; Newark, DE; December 1996

TE Connectivity (Raychem) Product Installation Instructions, HVS Series Cable Splice Shim Kit for 1/C Extruded Dielectric (Poly/EPR) Power Cables: Metallic Tape, Wire Shield, UniShield®, LC Shield, Lead Sheath or Concentric Neutral URD Cables, Raychem Corporation; Electrical Products Division; Fuquay-Varina, NC; June 1998

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