

1 Scope

This specification establishes the materials, design, marking, installation, inspection, and performance requirements of ILSCO's SureCrimp® copper and aluminum compression connector system, including termination lugs and splices.

2 Materials

- 2.1 All compression connections shall use ILSCO's SureCrimp® connectors.
- 2.2 SureCrimp® Copper compression connectors shall be manufactured from high strength seamless copper tubing in compliance with ASTM B75.
- 2.3 SureCrimp® Aluminum compression connectors shall be manufactured from high strength seamless aluminum tubing in compliance with ASTM B609 and pre-filled with De-Ox® oxide inhibiting compound.
- 2.4 All connectors shall be electro-tin plated in compliance with ASTM B-545-97 and B571-97.
- 2.5 Connectors shall be RoHS compliant.

3 Design

- 3.1 SureCrimp® Copper compression connectors shall be capable of crimping copper conductors sized from 10 AWG to 1000 kcmil class B/C, G, H, I, K, M, and #8 to 1111 DLO.
- 3.2 SureCrimp® Aluminum compression connectors shall be capable of crimping aluminum and copper conductors sized from 8 AWG to 1000 kcmil class B/C.
- 3.3 All connectors shall be range taking; accepting different conductor sizes.
- 3.4 All connector ends shall have chamfered barrels for easy conductor insertion.
- 3.5 All connectors shall be suitable for use in circuits rated up to 35kV.

- 3.6 All termination lug designs shall have mounting options to accommodate:
 - 3.6.1 Standard and narrow tang options
 - 3.6.2 Straight, 45-deg bent, or 90-deg bent tang options
 - 3.6.3 Blank tang and one-hole or two-hole mounting bolt options
 - 3.6.4 Options to accommodate #10, 1/4", 5/16", 3/8", 1/2", or 5/8" mounting bolts
- 3.7 SureCrimp® Copper compression connectors shall be rated for copper solid, stranded and flexible conductors to 90-deg C.
- 3.8 SureCrimp® Aluminum compression connectors shall be dual rated for both copper and aluminum conductors to 90-deg C.

4 Marking

- 4.1 All connectors shall be clearly and permanently marked with the following information:
 - 4.1.1 ILSCO or ILSCO's inspection symbol, ①
 - 4.1.2 Complete catalog part number
 - 4.1.3 Conductor sizes and classes accommodated
 - 4.1.4 Application die index number
 - 4.1.5 Color coding; copper connectors only
 - 4.1.6 Conductor type and rating; aluminum connectors only
 - 4.1.7 Crimp locations
 - 4.1.8 Certification marking:
 - UL Listing mark, and
 - CSA Certification mark

5 Installation

- 5.1 Installation of connectors shall be made in accordance with information sheets provided with the connectors and available at www.ilsco.com.
- 5.2 Information sheets shall contain all of the UL and CSA approved crimping tools, application dies, and minimum number of crimps for each combination.
- 5.3 Connectors shall be capable of installation during all types of weather events, humidity levels, and field conditions using standard industry tools and without special safety precautions or procedures.
- 5.4 Installation of all connectors shall not require flammable materials, ignition, or produce any flames, hazardous materials, or byproducts.

6 Inspection

- 6.1 Application dies shall provide a permanent embossment, onto the connector, of the die index number and manufacturer's symbol, on each successful crimp. The index number shall match the marking on the connector information sheet.
- 6.2 Connector marking information shall be legible for post- installation inspection
- 6.3 Connectors with site-windows shall allow for post- installation verification of acceptable conductor insertion.

7 Performance

- 7.1 All system connectors shall be Listed by Underwriters Laboratories (UL) per UL 486A-486B Standard for Wire Connectors and per ANSI/UL 467 Standard for Grounding and Bonding Equipment.
- 7.2 All system connectors shall be Certified by Canadian Standards Association (CSA) per CSA C22.2 No. 65 and per CSA C22.2 No. 41.
- 7.3 Compression connectors shall be UL Listed, per 7.1, and CSA Certified, per 7.2, with ILSCO, Milwaukee, Greenlee, Thomas & Betts, Anderson, and Burndy compression tools, and, if the compression tool is die-taking, their equivalent application dies.
- 7.4 SureCrimp® Copper compression connectors shall be UL Listed, per 7.1, and CSA Certified, per 7.2, with solid copper conductors, stranded class B/C copper conductors, and flex class G, H, I, K, M, and DLO copper conductors.
- 7.5 SureCrimp® Aluminum compression connectors shall be UL Listed, per 7.1, and CSA Certified, per 7.2, with solid copper and aluminum conductors and stranded class B/C copper and aluminum conductors.

- 7.6 All connectors, crimped with compression tools and application dies Listed in 3.1, shall exceed the minimum Certification agency pullout tests by 200%.