CANADIAN STANDARDS ASSOCIATION

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Electrical quick-connect terminals

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Electrical Quick-Connect Terminals

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Commitment for Amendments

This standard is issued jointly by the Canadian Standards Association (CSA) and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to CSA or UL at any time. Revisions to this standard will be made only after processing according to the standards development procedures of CSA and UL. CSA and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue.

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The most recent designation of ANSI/UL 310 as an American National Standard (ANSI) occurred on May 20, 2009. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

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Preface

This is the harmonized CSA and UL standard for Electrical Quick-Connect Terminals. It is the Second edition of CSA-C22.2 No. 153–09 and the Eighth edition of UL 310. This edition of CSA C22.2 No. 153 supersedes the previous edition published in 1981 under the title *Quick-Connect Terminals*. This edition of UL 310 supersedes the previous edition published May 27, 2003.

This harmonized standard was prepared by the Canadian Standards Association (CSA) and Underwriters Laboratories Inc. (UL). The efforts and support of the CANENA Technical Harmonization Subcommittee 99, Electrical Quick-Connect Terminals, are gratefully acknowledged.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was reviewed by the CSA Integrated Committee on Electrical Connectors, under the jurisdiction of the CSA Technical Committee on Wiring Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee. This Standard was reviewed by UL's Standards Technical Panel (STP) for Electrical Quick-Connect Terminals, STP 310.

This standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

Where reference is made to a specific number of samples to be tested, the specified number is considered a minimum quantity.

> **Note:** *Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.*

Level of harmonization

This standard uses the IEC format but is not based on, nor is it considered equivalent to, an IEC standard.

This standard is published as an identical standard for CSA and UL.

An identical standard is a standard that is exactly the same in technical content except for national differences resulting from conflicts in codes and governmental regulations. Presentation is word for word except for editorial changes.

Reasons for differences from IEC

This standard provides requirements for electrical quick-connect terminals for use in accordance with the electrical installation codes of Canada and the United States. At present there is no IEC Standard for electrical quick-connect terminals for use in accordance with these codes. Therefore, this standard does not employ any IEC Standard for base requirements.

Interpretations

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

CSA effective date

The effective date for CSA International will be announced through *CSA Informs* or a CSA certification notice.

UL effective date

As of May 27, 2009 all products Listed or Recognized by UL must comply with the requirements in this standard

A UL effective date is one established by Underwriters Laboratories Inc. and is not part of the ANSI approved standard.

1 Scope

1.1 This standard applies to quick-connect terminals, both connectors and tabs, having nominal widths of 2.8, 3.2, 4.8, 5.2, and 6.3 mm (0.110, 0.125, 0.187, 0.205, and 0.250 in). They are intended for internal wiring connections in electrical equipment and for the field termination of conductors to electrical equipment in accordance with Part I of the *Canadian Electrical Code,* C22.1, in Canada, and the *National Electrical Code,* NFPA 70, in the United States of America.

1.2 These requirements apply to quick-connect terminals intended for use with one or two 22 – 10 AWG (0.32 - 5.3 mm^2) copper conductors.

1.3 These requirements do not apply to terminals for use with aluminum conductors.

1.4 These requirements do not apply to multi-pole devices. Multi-pole devices are covered by UL 1977 and CSA C22.2 No. 182.3.

1.5 In Canada, general requirements applicable to this standard are given in CAN/CSA-C22.2 No. 0.

2 Definitions

For the purpose of this standard the following definitions apply.

2.1 BURR – An extraneous protrusion in the stock, not considered an integral functional part of the connector or tab.

2.2 CONNECTOR (female connector) – That portion of a quick-connect termination which is pushed onto the male tab.

2.3 C26000 ALLOY – A copper-zinc alloy consisting of approximately 70 percent copper and 30 percent zinc (cartridge brass) as specified by the *Copper Development Association's Copper Development Alloy (CDA) Standards Handbook, Wrought Copper and Copper Alloy Mill Products, Part 2 – Alloy Data*.

2.4 DETENT – A dimple (depression) or hole in the male tab that engages a raised portion on the female connector, thus providing a latch for the mating parts.

2.5 PRODUCTION TAB (male tab) – That portion of a quick-connect termination which receives the female connector.

2.6 QUICK-CONNECT TERMINATION – An electrical connection consisting of a male tab and female connector that can be readily inserted or withdrawn without the use of a tool.

2.7 REFERENCE POINT – A specially marked point on a connector or tab that is used when making electrical test measurements.

2.8 TERMINAL – An electrical connecting device; may be either a female connector or male tab.

2.9 TEST TAB (male test tab) – A male tab, manufactured to close tolerances and with specific materials, used for the purpose of conducting tests with production female connectors.