C22.2 No. 182.1-13

CSA Group

Plugs, receptacles, and cable connectors of the pin and sleeve type

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Fourth Edition

Underwriters Laboratories Inc.
UL 1682
Fourth Edition

Plugs, Receptacles, and Cable Connectors of the Pin and Sleeve Type

October 4, 2013

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Commitment for Amendments

This standard is issued jointly by the Canadian Standards Association (operating as "CSA Group"), and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to CSA Group or UL at any time. Revisions to this standard will be made only after processing according to the standards development procedures of CSA Group and UL. CSA Group 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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This Standard is subject to periodic review, and suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquires@csagroup.org and include ″Proposal for change″ in the subject line: Standard designation (number); relevant clause, table, and/or figure number; wording of the proposed change; and rationale for the change.

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This ANSI/UL Standard for Safety consists of the Fourth edition. The most recent designation of ANSI/UL 1682 as an American National Standard (ANSI) occurred on October 4, 2013. 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 UL and CSA Group Standard for Plugs, Receptacles, and Cable Connectors of the Pin and Sleeve Type. It is the Fourth edition of CSA C22.2 No. 182.1 and the Fourth edition of UL 1682. This edition of CSA C22.2 No. 182.1 supersedes the previous edition published in 2007. This edition of UL 1682 supersedes the previous edition published in 2007.

For products intended for use in Canada, general requirements are given in CAN/CSA-C22.2 No. 0.

This harmonized Standard was prepared by CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the CANENA Technical Harmonization Committee 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 Wiring Devices for Household and General Use 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 has been approved by the American National Standards Institute (ANSI) as an American National Standard.

A UL standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest set of revised requirements.

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 is published as an equivalent Standard. An equivalent Standard is a Standard that is substantially the same in technical content, except as follows. Technical deviations are allowed for Codes and Government Regulations and those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental, climatic, geographical, technological, or infrastructural factors, scientific justification, or the level of protection that the country considers appropriate. Presentation is word for word except for editorial changes.

Interpretations

The interpretation by the SDO 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 SDO. 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 SDOs to more accurately reflect the intent.

CSA Group Effective Date

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

UL Effective Date

As of October 4, 2013, all products Listed, Recognized, or Classified 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 pin and sleeve type plugs, receptacles, power inlets, and connectors, rated up to 800 amperes and up to 600 volts ac or dc, and which may include up to eight pilot contacts. These devices are intended to provide power from branch circuits, or are for direct connection to the branch circuit in accordance with the Canadian Electrical Code Part I (CEC), C22.1, and the National Electrical Code (NEC), ANSI/NFPA 70, using copper conductors, for use in either indoor or outdoor nonhazardous locations. In Canada, the terminals of a device intended to accommodate aluminum conductors also comply with CSA C22.2 No. 65.

1.2 In the U.S., this standard does not apply to single conductor pin and sleeve devices.

1.3 This standard does not apply to:

a) Devices molded integrally with flexible cord or cable that are covered by UL 817 and CSA C22.2 No. 21;

b) General and special use devices, such as attachment plugs, receptacles, cord connectors, inlets, current taps, flatiron and appliance plugs, that are covered by UL 498 and CSA C22.2 No. 42, CSA C22.2 No. 57, and CSA C22.2 No. 182.2;

c) Single and multi-pole connectors intended for connection to copper conductors, for use in data, signal, control and power applications within and between electrical equipment, where exposed, that are covered by UL 1977 and CSA C22.2 No. 182.3;

d) Devices intended for use in hazardous (Classified) locations that are covered by UL 1203 and CSA C22.2 No. 159; and

e) Products such as switched interlocks that are covered by UL 508 and CSA C22.2 No. 14.

2 Definitions

2.1 For the purposes of this standard, the following definitions apply.

2.2 CONNECTOR (CABLE CONNECTOR) – A portable receptacle that is intended to provide power, with means for attachment of flexible cord or cable and not intended for permanent mounting.

2.3 CONTACT – A conductive element in a component that mates with a corresponding element to provide an electrical path.

2.4 CONTACT, PILOT – A conductive element intended to carry an indicating or controlling signal.

2.5 DELAYED ACTION – An arrangement that delays the separation of device housings which is intended to reduce the likelihood of exposure of arcing contacts during the breaking of the circuit when the plug is withdrawn.

2.6 ENCLOSURE – The case or housing into which the insulator and contacts are assembled. The enclosure system can be composed of elements such as outlet boxes, mounting panels, receptacles, plugs, and connectors.

2.7 GROUNDING (BONDING) PATH – A path between the grounding pin, or contact and the grounding terminal or, if the device has no grounding terminal, the point at which the path makes contact with a part of the metal raceway system, such as a box, box cover, or the raceway itself.