CAN/ULC-60900:2022

LIVE WORKING – HAND TOOLS FOR USE UP TO 1 000 V AC AND 1 500 V DC

International Electrotechnical Commission

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Standard for Live Working – Hand Tools for Use Up To 1 000 V AC and 1 500 V DC, CAN/ULC-60900

Fourth Edition, Dated August 26, 2021

Summary of Topics

This revision of CAN/ULC-60900 dated January 6, 2022 includes an editorial correction to include the degree of correspondence between this National Standard of Canada and the IEC standard.

CAN/ULC-60900 is an adoption of IEC 60900 fourth edition, issued 2018. The fourth edition also reflects the latest SCC approval date from the the proposal dated February 16, 2021.

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD. IN THOSE INSTANCES, THE RELEVANT VERSIONS ARE AVAILABLE FOR PURCHASE.

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CAN/ULC-60900:2022

(IEC 60900:2018, IDT)

LIVE WORKING – HAND TOOLS FOR USE UP TO 1 000 V AC AND 1 500 V DC

ICS 13.260, 29.240.20, 29.260.99

International Electrotechnical Commission

First Edition . . . . . October 1999
Second Edition . . . . . March 2009
Third Edition . . . . . May 2014
FOURTH EDITION . . . . . AUGUST 26, 2021
REVISION . . . . . JANUARY 6, 2022

ISSN 0317-526X
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PREFACE

This is the Fourth Edition of CAN/ULC 60900, Live Working – Hand Tools for Use Up To 1 000 V AC and 1 500 V DC, IEC 60900 (Fourth Edition 2018).

This Edition of the Standard has been formally approved by the ULC Standards Committee on Live Working.

This Standard has been developed in compliance with the requirements of Standards Council of Canada (SCC) for accreditation of a Standards Development Organization.

Only metric SI units of measurement are used in this Standard. If a value for measurement is followed by a value in other units in parentheses, the second value may be approximate. The first stated value is the requirement.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

This Fourth Edition National Standard of Canada is based on, and now supersedes, the Third Edition of CAN/ULC-60900-14.

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Comments or proposals for revisions on any part of the Standard may be submitted at any time. Proposals should be submitted via a Proposal Request in the On-Line Collaborative Standards Development System (CSDS) at https://csds.ul.com/canada.

This Standard is intended to be used for conformity assessment.

January 2022

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FOREWORD

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LIVE WORKING – HAND TOOLS FOR USE UP TO 1 000 V AC AND 1 500 V DC

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International Standard IEC 60900 has been prepared by IEC technical committee 78: Live working.

This fourth edition cancels and replaces the third edition, published in 2012. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) addition of a third category of tools has been added, namely *hybrid hand tools*;

b) introduction of a new informative Annex A on examples of *insulated*, *insulating* and *hybrid hand tools*.

The text of this standard is based on the following documents:

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FDIS	Report on voting
78/1221/FDIS	78/1229/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

Terms defined in Clause 3 are given in *italic* print throughout this document.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

• reconfirmed,

• withdrawn,

• replaced by a revised edition, or

• amended.

The contents of the corrigenda of January 2019 and May 2020 have been included in this copy.

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INTRODUCTION

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LIVE WORKING – HAND TOOLS FOR USE UP TO 1 000 V AC AND 1 500 V DC

1 Scope

This document is applicable to *insulated*, *insulating* and *hybrid hand tools* used for working live or close to live parts at nominal voltages up to 1 000 V AC and 1 500 V DC.

The products designed and manufactured according to this document contribute to the safety of the users provided they are used by skilled persons, in accordance with safe methods of work and the instructions for use (where appropriate).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60212, *Standard conditions for use prior to and during the testing of solid electrical insulating materials*

IEC 60417, *Graphical symbols for use on equipment* (available at: http://www.graphical-symbols.info/equipment)

IEC 61318, *Live working – Conformity assessment applicable to tools, devices and equipment*

IEC 61477, Live working – *Minimum requirements for the utilization of tools, devices and equipment*

ISO 1174-1, *Assembly tools for screw and nuts – Driving squares – Part 1: Driving squares for hand socket tools*

ISO 9654, *Pliers and nippers for electronics – Single-purpose nippers – Cutting nippers*

ISO 9655, *Pliers and nippers for electronics – Single-purpose pliers – Pliers for gripping and manipulating*

ISO 9656, *Pliers and nippers for electronics – Test methods*

ISO 9657, *Pliers and nippers for electronics – General technical requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61318 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

• IEC Electropedia: available at http://www.electropedia.org/

• ISO Online browsing platform: available at http://www.iso.org/obp

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NOTE The definitions of general terms used in this document are given in IEC 60050 or in special definitions given in IEC 60743.

3.1
hand tool
hand held tool

Note 1 to entry: *Hand tools* may be *insulated hand tools*, *insulating hand tools* or *hybrid hand tools* (see Annex A).

Note 2 to entry: *Hand tools* are normally tools such as screwdrivers, pliers, spanners or knives.

Note 3 to entry: *Hand tools* are designed to provide protection to the worker against electric shock.

[SOURCE: IEC 60050-651:2014, 651-21-19, modified – Note 1 to entry has been modified to refer to Annex A.]

3.1.1
hybrid hand tool
hand tool made from insulating material(s) with exposed conductive parts at the *working head*

Note 1 to entry: *Hybrid hand tools* may have some non-exposed conductive parts used for reinforcement.

[SOURCE: IEC 60050-651:2014, 651-21-22]

3.1.2
insulated hand tool
hand tool made of conductive material(s), fully or partially covered by insulating material(s)

[SOURCE: IEC 60050-651:2014, 651-21-20]

3.1.3
insulating hand tool
hand tool made totally or essentially from insulating material(s) except for inserts made from conductive material(s) used for reinforcement, but with no exposed conductive parts

[SOURCE: IEC 60050-651:2014, 651-21-21,]

3.2
working head
part of the tool head that is limited to the working surface and the contact area

Note 1 to entry: See Figure 5 and Figure 7.

4 Requirements

4.1 General requirements

4.1.1 Safety

Insulated, insulating and *hybrid hand tools* shall be manufactured and dimensioned in such a way that they protect the user from electric shock.

NOTE 1 *Insulating hand tools* minimize the risk of short-circuits between two parts at different potentials.

NOTE 2 *Hybrid hand tools* reduce the risk of short-circuits between two parts at different potentials.

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