



UL 61058-2-5

STANDARD FOR SAFETY

Switches for Appliances – Part 2-5:
Particular Requirements for Change-
Over Selectors

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UL Standard for Safety for Switches for Appliances – Part 2-5: Particular Requirements for Change-Over Selectors, UL 61058-2-5

First Edition, Dated March 31, 2020

Summary of Topics

The revision of ANSI/UL 61058-2-5 dated April 30, 2021 includes an editorial revision to [101DV](#) in the IEC Foreword.

As noted in the Commitment for Amendments statement located on the back side of the title page, UL and CSA are committed to updating this harmonized standard jointly. CSA and UL will issue revisions to this standard bearing their date of issue.

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.

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First Edition
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Underwriters Laboratories Inc.
UL 61058-2-5
First Edition

Switches for Appliances – Part 2-5: Particular Requirements for Change-Over Selectors

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This national standard is based on publication IEC 61058-2-5, Third Edition (2018).



ANSI/UL 61058-2-5-2020



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 anytime. 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 ANSI/UL Standard for Safety consists of the First Edition including revisions through April 30, 2021.

The most recent designation of ANSI/UL 61058-2-5 as an American National Standard (ANSI) occurred on March 31, 2020. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface. The National Difference Page and IEC Foreword are also excluded from the ANSI approval of IEC-based standards.

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PREFACE

This is the harmonized CSA Group and UL standard for Switches for Appliances – Part 2-5: Particular Requirements for Change-Over Selectors. It is the first edition of CSA C22.2 No. 61058-2-5, and the first edition of UL 61058-2-5. This harmonized standard has been jointly revised on April 30, 2021. For this purpose, CSA Group and UL are issuing revision pages dated April 30, 2021.

This harmonized standard is based on IEC Publication 61058-2-5: third edition Switches for Appliances – Part 2-5: Particular Requirements for Change-Over Selectors, issued November 2018. IEC 61058-2-5 is copyrighted by the IEC.

This harmonized standard was prepared by CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the International Harmonization Committee on Switches for Appliances 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, 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 developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Application of Standard

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

CSA C22.2 No. 61058-2-5 is to be used in conjunction with the third edition of CAN/CSA-C22.2 No. 61058-1 and the first edition of CAN/CSA-C22.2 No. 61058-1-1. The requirements for change-over selectors are contained in this Part 2 Standard and CAN/CSA-C22.2 No. 61058-1. Requirements of this Part 2 Standard, where stated, amend the requirements of CAN/CSA-C22.2 No. 61058-1. Where a particular subclause of CAN/CSA-C22.2 No. 61058-1 is not mentioned in CSA C22.2 No. 61058-2-5, the CAN/CSA-C22.2 No. 61058-1 subclause applies.

UL Standard 61058-2-5 is to be used in conjunction with the fifth edition of UL 61058-1 and the first edition of UL 61058-1-1. The requirements for change-over selectors are contained in this Part 2 Standard and UL 61058-1. Requirements of this Part 2 Standard, where stated, amend the requirements of UL 61058-1. Where a particular subclause of UL 61058-1 is not mentioned in UL 61058-2-5, the UL 61058-1 subclause applies.

Level of Harmonization

This standard adopts the IEC text with national differences.

This standard is published as an identical standard for CSA Group 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.

All national differences from the IEC text are included in the CSA Group and UL versions of the standard. While the technical content is the same in each organization's version, the format and presentation may differ.

Reasons for Differences From IEC

Differences from the IEC are being added in order to address safety and regulatory situations present in the US and Canada.

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.

IEC Copyright

For CSA Group, the text, figures, and tables of International Electrotechnical Commission Publication 61058-2-5 Switches for appliances – Part 2-5: Particular requirements for change-over selectors, copyright 2018, are used in this standard with the consent of the International Electrotechnical Commission. The IEC Foreword is not a part of the requirements of this standard but is included for information purposes only.

These materials are subject to copyright claims of IEC and UL. No part of this publication may be reproduced in any form, including an electronic retrieval system, without the prior written permission of UL. All requests pertaining to the Switches for appliances – Part 2-5: Particular requirements for change-over selectors, UL 61058-2-5 Standard should be submitted to UL.

NATIONAL DIFFERENCES

In the CSA Group and UL publications of this standard, National Differences from the text of International Electrotechnical Commission (IEC) Publication 61058-2-5, Switches for Appliances – Part 2-5: Particular requirements for change-over selectors, copyright 2018, are indicated by notations (differences) and are presented in bold text. The national difference type is included in the body.

There are five types of National Differences as noted below. The difference type is noted on the first line of the National Difference in the standard. The standard may not include all types of these National Differences.

DR – These are National Differences based on the **national regulatory requirements**.

D1 – These are National Differences which are based on **basic safety principles and requirements**, elimination of which would compromise safety for consumers and users of products.

D2 – These are National Differences from IEC requirements based on existing **safety practices**. These requirements reflect national safety practices, where empirical substantiation (for the IEC or national requirement) is not available or the text has not been included in the IEC standard.

DC – These are National Differences based on the **component standards** and will not be deleted until a particular component standard is harmonized with the IEC component standard.

DE – These are National Differences based on **editorial comments or corrections**.

Each national difference contains a description of what the national difference entails. Typically one of the following words is used to explain how the text of the national difference is to be applied to the base IEC text:

Addition / Add - An addition entails adding a complete new numbered clause, subclause, table, figure, or annex. Addition is not meant to include adding select words to the base IEC text.

Modification / Modify - A modification is an altering of the existing base IEC text such as the addition, replacement or deletion of certain words or the replacement of an entire clause, subclause, table, figure, or annex of the base IEC text.

Deletion / Delete - A deletion entails complete deletion of an entire numbered clause, subclause, table, figure, or annex without any replacement text.

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FOREWORD

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SWITCHES FOR APPLIANCES – Part 2-5: Particular requirements for change-over selectors

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.

3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.

4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.

5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.

6) All users should ensure that they have the latest edition of this publication.

7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.

8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.

9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61058-2-5 has been prepared by subcommittee 23J: Switches for appliances, of IEC technical committee 23: Electrical accessories.

This third edition cancels and replaces the second edition published in 2010 and constitutes a technical revision.

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

- a) updated references due to new structure of IEC 61058-1;
- b) changes on conducting the heating test due to the corresponding changes in IEC 61058-1.

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

FDIS	Report on voting
23J/447/FDIS	23J/449/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.

This standard is to be used in conjunction with IEC 61058-1:2016 and IEC 61058-1-1:2016.

This document supplements or modifies the corresponding clauses in IEC 61058-1, so as to convert that publication into the IEC standard: *Particular requirements for change-over selectors*.

When a particular subclause of IEC 61058-1 is not mentioned in this document, that subclause applies as far as reasonable. Where this document states "addition" or "replacement", the relevant text of IEC 61058-1 is to be adapted accordingly.

In this standard:

1) the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type;*
- notes/explanatory matter: in smaller roman type.

2) subclauses, figures and tables which are additional to those in IEC 61058-1 are numbered starting from 101.

A list of all the parts in the IEC 61058 series, published under the general title *Switches for appliances*, can be found on the IEC website.

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.

101DV D2 Addition of the following:

This nationally adopted Part 2-5 standard shall be used in conjunction with the nationally adopted IEC 61058-1 Part 1 standard, the nationally adopted IEC 61058-1-1 Part 1-1 standard, the nationally adopted IEC 61058-1-2 Part 1-2 standard, and any relevant nationally adopted IEC 61058-2-x Part 2 standards. For references to IEC 61058, IEC 61058-1, IEC 61058-1-1, or IEC 61058-1-2, replace the reference with CAN/CSA-C22.2 No. 61058/UL

61058, CAN/CSA-C22.2 No. 61058-1/UL 61058-1, CAN/CSA-C22.2 No. 61058-1-1/UL 61058-1-1, or CAN/CSA-C22.2 No. 61058-1-2/UL 61058-1-2 accordingly.

102DV DE *Addition of the following:*

The numbering system in the standard uses a space instead of a comma to indicate thousands and uses a comma instead of a period to indicate a decimal point. For example, 1 000 means 1,000 and 1,01 means 1.01.

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SWITCHES FOR APPLIANCES – Part 2-5: Particular requirements for change-over selectors

1 Scope

Replacement:

This Part of IEC 61058 applies to change-over selectors (mechanical or electronic) for appliances actuated by hand, by foot or by other human activity, to operate or control electrical appliances and other equipment for household or similar purposes with a rated voltage not exceeding 480 V and a rated current not exceeding 63 A.

These change-over selectors are intended to be operated by a person, via an actuating member or by actuating a sensing unit. The actuating member or sensing unit can be integral with or arranged separately, either physically or electrically, from the switch, and can involve transmission of a signal, for example electrical, optical, acoustic or thermal, between the actuating member or sensing unit and the switch.

Change-over selectors which incorporate additional control functions governed by the switch function are within the scope of this document.

This document also covers the indirect actuation of the switch when the operation of the actuating member or sensing unit is provided by a remote control or a part of an appliance or equipment such as a door.

NOTE 1 Electronic change-over selectors can be combined with mechanical change-over selectors giving full disconnection or micro-disconnection.

NOTE 2 Electronic change-over selectors without a mechanical switch in the supply circuit provide only electronic disconnection. Therefore, the circuit on the load side is always considered to be live.

NOTE 3 For change-over selectors used in tropical climates, additional requirements can apply.

NOTE 4 Attention is drawn to the fact that the standards for appliances can contain additional or alternative requirements for change-over selectors.

NOTE 5 Throughout this document, the word "appliance" means "appliance or equipment".

This document applies to change-over selectors intended to be incorporated in, on, or with an appliance.

This document also applies to change-over selectors incorporating electronic devices.

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 61058-1:2016, *Switches for appliances – Part 1: General requirements*

3 Terms and definitions

This clause of Part 1 is applicable, except as follows.

3.3 Terms and definitions relating to the different types of switches

Additional term and definition:

3.3.101

change-over selector

device designed to carry, but not to make or break, current, used for changing the connections of one or more electric circuits

4 General requirements

This clause of Part 1 is applicable.

5 General information on tests

This clause of Part 1 is applicable, except as follows.

Subclauses 5.2.2 and 5.2.9 of IEC 61058-1:2016 are not applicable.

Addition at the end of 5.4:

For the tests referred to in Clauses [13](#) to [18](#), three specimens are used.

6 Rating

This clause of Part 1 is applicable.

7 Classification

This clause of Part 1 is applicable, except as follows.

Subclause 7.2 of IEC 61058-1:2016 is not applicable.

Additional subclause:

7.4 According to number of operating cycles

7.4.101 50 operating cycles.

Additional subclauses:

7.101 According to type of actuation of the switch

7.101.1 – locked change-over selector;

7.101.2 – unlocked change-over selector;

7.101.3 – change-over selector actuated with a tool.

NOTE Complex actuation of the actuating member (e.g. by the subsequent actuation in at least two different directions to complete the operation of the switch) is regarded as being a locking means.