CSA C22.2 No. 178.1:14
National Standard of Canada
(reaffirmed 2019)

Transfer switch equipment

Standards Council of Canada
Conseil canadien des normes

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Revision History

CSA C22.2 No. 178.1:14, Transfer switch equipment

National Standard of Canada — September 2019
Outside front cover, National Standard of Canada text, and title page. 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.

Update No. 2
C22.2 No. 178.1-14
September 2018

Note: *For information about the* ***Standards Update Service*** *or if you are missing any updates, go to* ***store.csagroup.org*** *or e-mail* ***techsupport@csagroup.org****.*

Title: *Transfer switch equipment* — originally published December 2014

Revisions issued: Update No. 1 — October 2015

The following revisions have been formally approved and are marked by a vertical line in the margin on the attached replacement pages:

Revised	Cover, Copyright page, Preface, Clauses 1.1, 1.2. 3.5, 4.2.2, 5.2.1.1, 5.2.4.2, 5.2.7.10, 6.19.19, 7.1.3, 8.1.2.1, 8.1.2.2, 8.2.3.1, 9.13.2.3, 9.13.3.10, 9.13.3.11, 9.13.3.18, E1.1, E1.2, E2.3, E2.4, E2.13, E3, E4.1, E5.1, J5.4, and J6.7, Tables 2, 25, 27, and J2, and Annex A1
New	Clauses 1.1 j), 1.2 f), 1.2 g), 3.7A, 5.2.6.2.5, 8.1.2.6, E1.2 a), E1.2 b), E2.3 a) 4) – E2.3 a) 6), E2.3 b) 5) – E2.3 b) 11), E2.3 c), E3.2, E3A, E5.1.1, E5.6 – E5.8, and G5.2.3 and Figure E3A.1
Deleted	Clauses 4.2.2 a) – d), 9.13.3.12, and 9.13.3.13

- Update your copy by inserting these revised pages.
- Keep the pages you remove for reference.

Third Edition, Dated December 22, 2014

Summary of Topics

This revision is being issued to incorporate the following changes:

Revision to Add Recreational Vehicle Transfer Switches to the Scope

Revisions to Address the Grounding and Bonding of Neutral Circuits

Revision to the Overload, Endurance, and Short Circuit Testing

Miscellaneous Revisions Regarding Inlet Assemblies, Mechanical Interlocking of Single Pole Inlets and Readily Accessible Service Disconnect Switches

Revisions Regarding the Use of "Circuit Breaker Based" Transfer Switches and Compliance with Service Disconnecting Requirements

Revision for Consistency with UL 50E Rain Test

Revisions to Annex E to Cover Freestanding Complete Packaged Fire Pump Power Transfer Units

Revisions to Address System Available Fault Calculations for Momentary Paralleling Situations

Clarification of Marking Requirements

Revised Requirements for Monitoring the Temperature on Inlets

Association of Standardization and Certification
NMX-J-672 ANCE
Second Edition

CSA Group
CSA C22.2 No. 178.1-14
Third Edition

Underwriters Laboratories Inc.
UL 1008
Eighth Edition

Transfer Switch Equipment

December 22, 2014

(Title Page Reprinted: September 24, 2018)

ANSI/UL 1008-2018

Commitment for Amendments

This standard is issued jointly by the Association of Standardization and Certification (ANCE), 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 ANCE, CSA Group, or UL at anytime. Revisions to this standard will be made only after processing according to the standards development procedures of ANCE, 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. ANCE will incorporate the same revisions into a new edition of the standard bearing the same date of issue as the CSA Group and UL pages.

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This Standard is subject to review within five years from the date of publication, 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 Eighth Edition including revisions through September 24, 2018. The most recent designation of ANSI/UL 1008 as an American National Standard (ANSI) occurred on September 14, 2018. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

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

To purchase UL Standards, visit UL's Standards Sales Site at http://www.shopulstandards.com/HowToOrder.aspx or call toll-free 1-888-853-3503.

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INTRODUCTION

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PREFACE

This is the harmonized ANCE, CSA Group, and UL standard for transfer switch equipment. It is the second edition of NMX-J-672-ANCE, the third edition of CSA C22.2 No. 178.1, and the eighth edition of UL 1008. This harmonized standard has been jointly revised on September 21, 2018. For this purpose, CSA Group and UL are issuing revision pages dated September 24, 2018, and ANCE is issuing a new edition dated [month day, year of revision pages].

This harmonized standard was prepared by the Association of Standardization and Certification, (ANCE), CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the Technical Harmonization Subcommittee for Transfer Switches and the Council of the Harmonization of Electrotechnical Standards for the Nations of the Americas (CANENA), are gratefully acknowledged.

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

The present Mexican Standard was developed by the CT CDI Control y Distribución Industrial from the Comité de Normalización de la Asociación de Normalización y Certificación, A.C., CONANCE, with the collaboration of the transfer switch manufacturers and users.

This standard was reviewed by the CSA Subcommittee on Automatic Transfer Switches, under the jurisdiction of the CSA Technical Committee on Industrial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee.

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.*

Level of harmonization

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

This standard is published as an equivalent standard for ANCE, CSA Group, and UL.

An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as 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.

Reasons for differences from IEC

There is no corresponding IEC standard.

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.

TRANSFER SWITCH EQUIPMENT

1 Scope

1.1 This standard applies to the following types of transfer switches that have a maximum rating of 1000 volts for use in non-hazardous locations, in accordance with Annex A1, Item 1:

a) Automatic transfer switches;

b) Manual or non-automatic transfer switches;

c) Closed transition transfer switches;

d) Hybrid transfer switches;

e) Transfer switches for fire pumps;

f) Bypass/isolating switches;

g) Softload transfer switches;

h) Transfer switches intended for use as service equipment;

i) Transfer switches intended for use in mobile/portable applications such as recreational vehicles, motor homes, camping trailers, and mobile health care facilities; and

j) In Mexico and the United States, branch circuit emergency lighting transfer switches (BCELTS). In Canada, the requirements for BCELTS do not apply.

1.2 This standard specifically does not apply to:

a) Double-throw switches for use in optional standby systems;

b) Switches used in equipment manufactured in accordance with Annex A1, Item 9;

c) In Canada, manually operated generator transfer panels in accordance with Annex A1, Item 12.

d) Transfer switches rated over 1000 V;

e) Solid-state (static) transfer equipment;

f) Transfer switches for aircraft; and

g) Transfer switches for water craft.