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CSA C22.2 No. 178.1:22
National Standard of Canada

Transfer switch equipment

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CSA C22.2 No. 178.1:22
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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 to judge its suitability for their particular purpose.

National Standard of Canada

CSA C22.2 No. 178.1:22
Transfer switch equipment

ICS 29.120.40

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Standard for Safety for Transfer Switch Equipment

Fourth Edition, Dated July 13, 2022

Summary of Topics

This new edition dated July 13, 2022 includes the following changes:

- ***Marking Requirements***
- ***Scope of Annex J***
- ***Miscellaneous Updates***
- ***Table 2***
- ***Revised LSI Circuit Breaker Markings in Annex I***
- ***New Annex K for Arc Resistant Design***
- ***New Annex L for Electromagnetic Compatibility***
- ***Annex M for Cord Connected Transfer Switch Equipment***
- ***Marking/Instruction for Short Circuit Withstand Rating when Protected by Fuses***
- ***Revision of Requirements for Transfer Switches with Integral Inlets***
- ***Table 25***
- ***Changes to Align with the 2020 NEC***
- ***Revisions for Inlets Rated 100A and Greater for Compliance with the 2020 NEC***
- ***New Annex N for Combination Meter/Transfer Equipment Assemblies***

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

CSA Group
CSA C22.2 No. 178.1:22
Fourth Edition

Underwriters Laboratories Inc.
UL 1008
Ninth Edition

Transfer Switch Equipment

July 13, 2022

ANSI/UL 1008-2022

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 inquiries@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 Ninth Edition. The most recent designation of ANSI/UL 1008 as an American National Standard (ANSI) occurred on July 13, 2022. 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.

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PREFACE

This is the harmonized ANCE, CSA Group, and UL standard for Transfer Switch Equipment. It is the third edition of NMX-J-672-ANCE, the fourth edition of CSA C22.2 No. 178.1, and the ninth edition of UL 1008. This edition of NMX-J-672-ANCE supersedes the previous edition published on December 22, 2014 and revised on September 24, 2018. This edition of CSA C22.2 No. 178.1 supersedes the previous edition published on December 22, 2014 and revised on September 24, 2018. This edition of UL 1008 supersedes the previous edition published on December 22, 2014 and revised on September 24, 2018.

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. This standard has been developed in compliance with the 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.

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;

j) Inlet assemblies for transfer switch equipment;

k) Arc resistant transfer switch equipment;

l) Cord connected transfer switch equipment;

m) Combination meter/transfer equipment assemblies; and

n) 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.

1.3 These requirements apply to transfer switches and their associated control devices including voltage sensing relays, frequency sensing relays, time-delay relays, and the like.