CSA Group

C22.2 No. 31-18
National Standard of Canada

Switchgear assemblies

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CSA Group

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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

C22.2 No. 31-18
Switchgear assemblies

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Preface

This is the eleventh edition of CSA C22.2 No. 31, *Switchgear assemblies*. It supersedes previous editions, published in 2014, 2010, 2004, 1989, 1983, 1977, 1972, 1965, 1958, and 1939.

It is one of a series of Standards issued by CSA Group under Part II of the *Canadian Electrical Code*. For general information on the Standards of the *Canadian Electrical Code, Part II*, see the Preface of CAN/CSA-C22.2 No. 0.

The applicable requirements of CSA TIL D-06 are incorporated in this Standard.

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

This Standard was prepared by the Integrated Committee on Switchgear Products, under the jurisdiction of the Technical Committee on Industrial Products, and the Strategic Steering Committee on Requirements for Electrical Safety and has been formally approved by the 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.

Interpretations: The Strategic Steering Committee on Requirements for Electrical Safety has provided the following direction for the interpretation of the standards under its jurisdiction: "The literal text shall be used in judging compliance of products with the safety requirements of this Standard. When the literal text cannot be applied to the product, such as for new materials or construction, and when a relevant committee interpretation has not already been published, CSA Group's procedures for interpretation shall be followed to determine the intended safety principle."

Notes:

1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
2) *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.*
3) *This Standard was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include "Request for interpretation" in the subject line:*
   a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
   b) *provide an explanation of circumstances surrounding the actual field condition; and*
   c) *where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.*

   Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are available on the* Current Standards Activities *page at* ***standardsactivities.csa.ca****.*
5) *This Standard is subject to review within five years from the date of publication. 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:*
   a) *Standard designation (number);*
   b) *relevant clause, table, and/or figure number;*
   c) *wording of the proposed change; and*
   d) *rationale for the change.*

C22.2 No. 31-18
Switchgear assemblies

1 Scope

1.1

This Standard applies to deadfront indoor enclosed and outdoor enclosed assemblies of switchgear devices such as

a) switches;
b) interrupting devices;
c) air circuit breakers;
d) power circuit breakers; and
e) control, metering, protective, and regulating equipment with associated interconnections and supporting structures.

1.2

This Standard covers equipment with a nominal voltage of 46 kV or less that is intended to be used

a) in accordance with the *Canadian Electrical Code, Part I*;
b) in non-hazardous locations;
c) for controlling and protecting the power from generators or other sources; and
d) for supplying electrical energy to power and lighting circuits.

1.3

This Standard does not apply to panelboards, industrial control equipment, switchboards for communication circuits , or low-voltage assemblies consisting of separately supported enclosed switches, enclosed circuit breakers, and possibly service meters, with interconnection between them enclosed in raceways.

Note: *Manufacturers and installers of switchgear assemblies approved under this Standard should take due note of the Canadian Electrical Code, Part I, with respect to the location of switchgear devices in areas where certain components might not be acceptable.*

1.4

Clauses 2 to 6 apply to all switchgear assemblies and are supplemented and amended by

a) Clause 7 for low-voltage switchgear assemblies; and
b) Clause 8 for high-voltage switchgear assemblies.

1.5

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (nonmandatory) to define their application.

2 Reference publications

This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below, including all amendments published thereto.

CSA Group

C22.1-15
Canadian Electrical Code, Part I

CAN/CSA-C22.2 No. 0-10 (R2015)
General requirements — Canadian Electrical Code, Part II

C22.2 No. 0.12-M1985 (R2016)
Wiring space and wire bending space in enclosures for equipment rated 750 V or less

CAN/CSA-C22.2 No. 0.17-00 (R2013)
Evaluation of properties of polymeric materials

C22.2 No. 0.19-10 (R2015)
Requirements for service entrance equipment

C22.2 No. 4-16
Enclosed and dead-front switches

C22.2 No. 5-16
Molded-case circuit breakers, molded-case switches and circuit-breaker enclosures

C22.2 No. 27-09 (R2013)
Busways

C22.2 No. 58-M1989 (R2015)
High-voltage isolating switches

C22.2 No. 94.2-15
Enclosures for electrical equipment, environmental considerations

C22.2 No. 178.1-14
Transfer switch equipment

C22.2 No. 193-M1983 (R2014)
High-voltage full-load interrupter switches

C22.2 No. 244-05 (R2015)
Switchboards

