



**CSA
Group**

C22.2 No. 204-17

Line isolation monitors

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Preface

This is the second edition of CSA C22.2 No. 204, *Line isolation monitors*. It is one of a series of Standards issued by CSA Group under Part II of the *Canadian Electrical Code*. It supersedes the previous edition published in 1984.

The changes to this edition include

- a) adding the requirement to comply with CAN/CSA-C22.2 No. 0;
- b) increasing the limit for maximum total hazardous index from 2 mA to 5 mA;
- c) reducing in the tolerance for the rms value of the monitor hazard index;
- d) clarifying the visual indicator;
- e) replacing clauses that are now covered by other CSA Group standards with references to those standards; and
- f) updating the referenced standards listed in Clause 2.

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

This Standard was prepared by the Subcommittee on Line Isolation Monitors, 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.

Interpretations: The Strategic Steering Committee on Requirements for Electrical Safety has provided the following direction for the interpretation of 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 CSA 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 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. 204-17

Line isolation monitors

1 Scope

1.1

This Standard applies to line isolation monitors designed to be installed and used as an ancillary part of a single-phase isolated (ungrounded) power distribution system not exceeding 300 V in accordance with the rules of the *Canadian Electrical Code, Part I*, including any rules that are applicable particularly to anaesthetizing locations and other patient care areas in hospitals and other health care facilities.

1.2

This Standard applies to all line isolation monitors and includes requirements for the enclosure in which they are mounted for installation.

1.3

This Standard applies to monitors of a kind that are programmed to measure, periodically or continuously, an impedance to ground of each “side” of a single-phase power supply and any connected load and to activate an alarm whenever either or both of these impedances are equal to or less than a preset limit.

1.4

This Standard applies to remote indicators designed to duplicate some or all of the alarm indications that are presented by a line isolation monitor.

1.5

This Standard does not include requirements for monitors for installations in hazardous locations, as *Canadian Electrical Code, Part I* does not provide for their installation in such locations.

1.6

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 (non-mandatory) to define their application.