

Signal equipment



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Preface

This is the third edition of CSA C22.2 No. 205, *Signal equipment*, one of a series of Standards issued by CSA Group under Part II of the *Canadian Electrical Code*. It supersedes the previous editions published in 2012 and 1983.

This edition updates the 2012 edition of CSA C22.2 No. 205. The updates include the expanded scope to cover components that monitor and control activity and the equipment powered by an energy limited Class 2 power supply.

The updates are intended to provide clarification for many new signal applications that are now in use. This edition also incorporates the new requirements for ozone, toxic gas and radon detectors.

For general information on the Standards of the *Canadian Electrical Code, Part II*, see the Preface of the latest edition of CAN/CSA-C22.2 No. 0, *General Requirements — Canadian Electrical Code, Part II*.

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 Standard Signal Equipment, under the jurisdiction of the Technical Committee on Consumer and Commercial 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 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. 205-17

Signal equipment

1 Scope

1.1

This Standard covers the electrical, fire, and shock hazard requirements for all permanently and cord-connected signal equipment intended for household, commercial and industrial use operating at

- a) nominal system voltage of 120 V for household use;
- b) nominal system voltages up to 600 V for commercial and industrial use; and
- c) double insulated equipment up to 240 V.

in non-hazardous locations in accordance with the rules of the *Canadian Electrical Code, Part I*.

1.2

The requirements are not intended to replace other requirements that are mandated by provincial, federal, or authorities having jurisdiction for aspects other than electrical fire and shock hazards, nor do they specify the performance of signal equipment.

Notes:

- 1) *While this document does not address the performance aspects of signaling equipment it does specify requirements for the electrical safety of these devices, including functional safety.*
- 2) *Devices that generate radio frequency signals may also be subject to the requirements of Industry Canada.*

1.3

This Standard covers equipment that performs a sensing and/or signaling function to convey alarm, trouble, status, or event-based information to the user and any subsequent associated activation function. The signal equipment may be stand alone or a part of a larger system. Signaling may employ wired or wireless means.

Note: *The equipment can employ audible, visual, motion, or other signaling means such as chimes, gongs, lights, and displays.*

1.4

This Standard applies to energy management equipment including sensing, monitoring, and actuation devices. The requirements also apply to home automation systems. The signal sensing components meeting the requirement of this Standard can be included in a smart grid application for energy management, other than for industrial applications.

1.5

This Standard applies to components that monitor and control activity, and which are:

- a) are inter-connected in a wireless sensor network (WSN) in a local network;
- b) communicate with local devices that are either wired or wireless.

1.6

This Standard also applies to equipment powered by an energy limited Class 2 power supply.