



**CSA C22.2 No. 207:15**  
*(reaffirmed 2020)*

# **Portable and stationary electric signs and displays**



# Legal Notice for Standards

Canadian Standards Association (operating as “CSA Group”) develops standards through a consensus standards development process approved by the Standards Council of Canada. This process brings together volunteers representing varied viewpoints and interests to achieve consensus and develop a standard. Although CSA Group administers the process and establishes rules to promote fairness in achieving consensus, it does not independently test, evaluate, or verify the content of standards.

## Disclaimer and exclusion of liability

This document is provided without any representations, warranties, or conditions of any kind, express or implied, including, without limitation, implied warranties or conditions concerning this document’s fitness for a particular purpose or use, its merchantability, or its non-infringement of any third party’s intellectual property rights. CSA Group does not warrant the accuracy, completeness, or currency of any of the information published in this document. CSA Group makes no representations or warranties regarding this document’s compliance with any applicable statute, rule, or regulation.

IN NO EVENT SHALL CSA GROUP, ITS VOLUNTEERS, MEMBERS, SUBSIDIARIES, OR AFFILIATED COMPANIES, OR THEIR EMPLOYEES, DIRECTORS, OR OFFICERS, BE LIABLE FOR ANY DIRECT, INDIRECT, OR INCIDENTAL DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES, HOWSOEVER CAUSED, INCLUDING BUT NOT LIMITED TO SPECIAL OR CONSEQUENTIAL DAMAGES, LOST REVENUE, BUSINESS INTERRUPTION, LOST OR DAMAGED DATA, OR ANY OTHER COMMERCIAL OR ECONOMIC LOSS, WHETHER BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR ANY OTHER THEORY OF LIABILITY, ARISING OUT OF OR RESULTING FROM ACCESS TO OR POSSESSION OR USE OF THIS DOCUMENT, EVEN IF CSA GROUP HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES.

In publishing and making this document available, CSA Group is not undertaking to render professional or other services for or on behalf of any person or entity or to perform any duty owed by any person or entity to another person or entity. The information in this document is directed to those who have the appropriate degree of experience to use and apply its contents, and CSA Group accepts no responsibility whatsoever arising in any way from any and all use of or reliance on the information contained in this document.

CSA Group is a private not-for-profit company that publishes voluntary standards and related documents. CSA Group has no power, nor does it undertake, to enforce compliance with the contents of the standards or other documents it publishes.

## Intellectual property rights and ownership

As between CSA Group and the users of this document (whether it be in printed or electronic form), CSA Group is the owner, or the authorized licensee, of all works contained herein that are protected by copyright, all trade-marks (except as otherwise noted to the contrary), and all inventions and trade secrets that may be contained in this document, whether or not such inventions and trade secrets are protected by patents and applications for patents. Without limitation, the unauthorized use, modification, copying, or disclosure of this document may violate laws that protect CSA Group’s and/or others’ intellectual property and may give rise to a right in CSA Group and/or others to seek legal redress for such use, modification, copying, or disclosure. To the extent permitted by licence or by law, CSA Group reserves all intellectual property rights in this document.

## Patent rights

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. CSA Group shall not be held responsible for identifying any or all such patent rights. Users of this standard are expressly advised that determination of the validity of any such patent rights is entirely their own responsibility.

## Authorized use of this document

This document is being provided by CSA Group for informational and non-commercial use only. The user of this document is authorized to do only the following:

If this document is in electronic form:

- load this document onto a computer for the sole purpose of reviewing it;
- search and browse this document; and
- print this document if it is in PDF format.

Limited copies of this document in print or paper form may be distributed only to persons who are authorized by CSA Group to have such copies, and only if this Legal Notice appears on each such copy.

In addition, users may not and may not permit others to

- alter this document in any way or remove this Legal Notice from the attached standard;
- sell this document without authorization from CSA Group; or
- make an electronic copy of this document.

If you do not agree with any of the terms and conditions contained in this Legal Notice, you may not load or use this document or make any copies of the contents hereof, and if you do make such copies, you are required to destroy them immediately. Use of this document constitutes your acceptance of the terms and conditions of this Legal Notice.



# ***Standards Update Service***

***CSA C22.2 No. 207:15***

***June 2015***

**Title:** *Portable and stationary electric signs and displays*

To register for e-mail notification about any updates to this publication

- go to [store.csagroup.org](http://store.csagroup.org)
- click on **Product Updates**

The **List ID** that you will need to register for updates to this publication is **2423417**.

If you require assistance, please e-mail [techsupport@csagroup.org](mailto:techsupport@csagroup.org) or call 416-747-2233.

Visit CSA Group's policy on privacy at [www.csagroup.org/legal](http://www.csagroup.org/legal) to find out how we protect your personal information.

*CSA C22.2 No. 207:15*  
***Portable and stationary electric  
signs and displays***



*®A trademark of the Canadian Standards Association, operating as "CSA Group"*

*Published in June 2015 by CSA Group  
A not-for-profit private sector organization  
178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3*

*To purchase standards and related publications, visit our Online Store at [store.csagroup.org](http://store.csagroup.org)  
or call toll-free 1-800-463-6727 or 416-747-4044.*

*ISBN 978-1-77139-825-1*

*© 2015 Canadian Standards Association  
All rights reserved. No part of this publication may be reproduced in any form whatsoever  
without the prior permission of the publisher.*

# Contents

Technical Committee on Consumer and Commercial Products	3
Integrated Committee on Lighting Products (ICLP)	5
Preface	11
<b>1 Scope</b>	<b>12</b>
<b>2 Reference publications</b>	<b>13</b>
<b>3 Definitions</b>	<b>15</b>
<b>4 General requirements for all electric signs</b>	<b>17</b>
4.1 General requirements	17
4.2 Construction	17
4.2.1 General	17
4.2.2 Sign bodies	17
4.2.3 Sheet metal	17
4.2.4 Nonmetallic panels and faces	18
4.2.5 Printed circuit boards	18
4.2.6 LED lamps, modules, and controlgear	18
4.3 Electrical enclosures	19
4.3.1 General	19
4.3.2 Openings in enclosures	19
4.3.3 Enclosure materials and metal thickness	20
4.4 Protection against rusting	21
4.5 Strain relief	22
4.6 Bushings	22
4.7 Spacings for low-voltage circuits	23
4.8 Methods of wiring	23
4.8.5 Separation of circuits	23
4.9 Identification of conductors	24
4.10 Wiring joints	24
4.11 Conductors	24
4.12 Lampholders	24
4.13 High-voltage wiring	24
4.14 Sizes of conductors and methods of wiring for high-voltage luminous discharge tube signs	25
4.15 Spacings for high-voltage wiring	25
4.16 Transformers and ballasts	26
4.17 Supports for high-voltage conductors and high-voltage luminous discharge tubing	26
4.18 Fluorescent lamp ballasts	26
4.19 Grounding and bonding	27
4.20 Marking	27
4.21 Tests	27
4.21.1 Normal temperature	27
4.21.2 Weatherproofness	28

4.21.3	Dielectric strength	28
4.21.4	Flaming oil test for perforated metal panels or wire screens	28
4.21.5	Strain Relief	29
<b>5</b>	<b>Stationary signs</b>	<b>29</b>
5.1	General	29
5.2	Provision for mounting	29
5.3	Securement spacings	29
5.4	Low-voltage wiring	30
5.4.1	Supply connections	30
5.5	Circuit loading	30
5.6	Enclosure of wiring	30
5.7	Disconnecting means	30
5.8	Sectional Signs	31
5.9	Transformers	31
5.10	Marking	31
5.11	Test	32
5.11.1	Test on assembly of non-rigid non-metallic panel material to its fastening means	32
<b>6</b>	<b>Portable signs</b>	<b>32</b>
6.1	General	32
6.2	Electrical enclosures	33
6.2.1	General	33
6.3	Supply connections	33
6.4	Wiring joints	33
6.5	Portable signs having rated secondary open-circuit of more than 7500 V	34
6.5.1	Construction	34
6.6	Marking	35
6.7	Tests	37
6.7.1	Mechanical strength	37
6.7.2	Impact	37
6.7.3	Loading	37
6.7.4	Probe	37
<hr/>		
Annex A (normative)	— Requirements for non-metallic tubing and associated non-metallic fittings for use with GTO cable in high-voltage luminous-discharge-tube signs	48
Annex B (normative)	— Requirements for component nonmetallic caps and sleeves used to enclose high voltage connections	56
Annex C (normative)	— Retrofit kits for sign conversion	68
Annex D (normative)	— Requirements for photovoltaic powered signs	81

# Preface

This is the second edition of CSA C22.2 No. 207, *Portable and stationary electric signs and displays*, one of a series of Standards issued by the Canadian Standards Association under Part II of the Canadian Electrical Code. It supersedes the previous edition published in 1989.

For general information on the Standards of the Canadian Electrical Code, Part II, see the preface of the latest issue of 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 Integrated Committee on Lighting Products (ICLP) under the jurisdiction of the Technical Committee on Consumer and Commercial Products and 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 committee interpretation has not already been published, CSA’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](mailto: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](http://standardsactivities.csa.ca).*
- 5) *This Standard is subject to review 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](mailto: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.*

# CSA C22.2 No. 207:15

## **Portable and stationary electric signs and displays**

### **1 Scope**

#### **1.1**

This Standard applies to electric signs and display equipment for indoor or outdoor use, in nonhazardous locations, intended for installation in accordance with the *Canadian Electrical Code, Part I* on branch circuits of not more than

- a) 750 V between conductors and involving lamp voltages of not more than 15 000 V for stationary signs; and
- b) 125 V between conductors and involving lamp voltages of not more than 7500 V for portable signs.
- c) 750 V between conductors and involving lamp voltages of more than 7500 V but not exceeding 15 000 V, not more than 7500 V to ground, and secondary current ratings not more than 30 mA, for portable and show-window luminous-discharge-tube signs and displays for indoor use.

**Note:** Throughout this Standard, the single word “sign(s)” is used to mean both “signs” and “displays”. However, for the purposes of this Standard, video flat panel displays are not considered “displays”.

#### **1.2**

This Standard includes requirements for signs having outline lighting wherein the sources of light are

- a) incandescent lamps;
- b) fluorescent lamps;
- c) high-voltage luminous discharge tubes, including neon tubes;
- d) high-intensity discharge lamps; and
- e) light emitting diodes (LED).

#### **1.3**

This Standard includes requirements for sectional signs.

#### **1.4**

The specific sign requirements are given in four clauses as follows:

- a) Clause [4](#) — General requirements for all electric signs;
- b) Clause [5](#) — Stationary signs;
- c) Clause [6](#) — Portable signs; and
- d) Annex [C](#) — Retrofit kits for sign conversion.

#### **1.5**

This Standard does not apply to

- a) Luminaires, covered in CSA C22.2 No. 250.0;
- b) Portable luminaires, covered in CSA C22.2 No. 250.4;
- c) Christmas tree and other decorative lighting outfits, covered in CSA C22.2 No. 37; or
- d) Swimming pool luminaires, submersible luminaires and accessories, covered in CSA C22.2 No. 89.