



CSA C22.2 No. 301:23
National Standard of Canada



Industrial electrical machinery



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Preface

This is the second edition of CSA C22.2 No. 301, *Industrial electrical machinery*, 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 2016.

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

The following are the major changes to this edition:

- a) expansion of Scope to include industrial robots and industrial robotics equipment;
- b) revisions and clarifications of existing requirements;
- c) introduction of new requirements for industrial robotics and industrial robotics equipment;
- d) introduction of new construction requirements related to temperature, enclosures, insulating materials, electrical spacings, and wet or outdoor locations;
- e) introduction of new electrical supply requirements, such as requirements for terminations, batteries, and battery circuits;
- f) revisions to equipment protection requirements and the introduction of surge protections applicable to industrial machineries;
- g) new bonding requirements for non-metallic enclosures;
- h) new marking requirements for wiring terminals;
- i) new type test requirements for battery overcharge test, breakdown components test, strain relief test, flexing test, and stability test; and
- j) introduction of Annex [D](#), *Additional requirements for industrial robots and industrial robotic equipment*.

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 Industrial Electrical Machinery, 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 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.*