CSA Group

C22.2 No. 14-13

Industrial control equipment

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Contents

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Preface

This is the twelfth edition of CSA C22.2 No. 14, *Industrial control equipment*, one of a series of Standards issued by the Canadian Standards Association under Part II of the *Canadian Electrical Code*. It supersedes the previous editions, published in 2010, 2005, 1995, 1991, 1987, 1985, 1973, 1966, 1953, 1942, and 1935.

This edition incorporates numerous revisions. The major revisions include adding requirements for Type F combination motor controllers by making changes to the text and tables, adding Annex D for pressure sensitive floor mats and the addition of numerous clauses and Table 55 to outline the requirements for reduced spacings. Numerous other changes to various clauses and figures have been added to clarify or update specific requirements. Secondly, some changes were made to align the requirements of this edition with the requirements in CANENA-developed trinational documents that are based on the IEC 60947 series of Standards and are being adopted by Canada.

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

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 Industrial Control, 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 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*** *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 periodic review, and 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. 14-13
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1 Scope

1.1

This Standard applies to control and protective devices, and accessory devices, rated at not more than 1500 V, for starting, stopping, regulating, controlling, or protecting electric motors, generators, heating apparatus, or other equipment used to control an industrial process that is intended to be installed and used in non-hazardous locations in accordance with the rules of the *Canadian Electrical Code, Part I*.

Notes:

1) *Examples of the industrial control devices covered by this Standard are manual and magnetic starters and controllers; thermal and magnetic overload relays; push-button stations (including selector switches and pilot lights); control circuit switches and relays; float-, flow-, pressure-, and vacuum-operated switches; resistors and rheostats; proximity switches; time-delay relays and switches; resistors and rheostats intended for heating and lighting, including those for motor generator fields; and control devices intended for heating and lighting.*

2) *The term "control" as used throughout this Standard applies to both starters and controllers.*

3) *Electrical instruments, such as meters, that can be included as part of control equipment are not covered by this Standard.*

1.2

This Standard also applies to assemblies of industrial control and protective devices rated 750 V or less, and includes assemblies of automatic control and process equipment.

1.3

Certain equipment intended for use with electric elevators, air-conditioning and refrigeration equipment, cranes and hoists, electronic and solid-state control equipment, and "TV"-rated relays, etc., can be subject to additional requirements not included in this Standard.

1.4

This Standard does not apply to equipment covered by other CSA Standards, such as power supplies, programmable logic controllers, assemblies of equipment intended solely for the distribution of power, assemblies for controlling power factor, switches other than manual motor controllers, and electrical components intended to protect circuits other than motor branch-circuits.

1.5

The industrial control equipment covered by this Standard is intended for use in an ambient temperature of 0 to 40 °C.

1.6

In CSA Standards, "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; "may" is used to express an option or that which is permissible within the limits of the standard; and "can" is used to express possibility or capability. 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

