CSA Group

CAN/CSA-E60730-2-9:18
(IEC 60730-2-9:2015+A1:2018, MOD)
National Standard of Canada

CAN/CSA-E60730-2-9:18
Automatic electrical controls — Part 2-9: Particular requirements for temperature sensing controls
(IEC 60730-2-9:2015+A1:2018, MOD)

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CSA Preface

This is the fourth edition of CAN/CSA-E60730-2-9, *Automatic electrical controls— Part 2-9: Particular requirements for temperature sensing controls*, which is an adoption, with Canadian deviations, of the identically titled IEC (International Electrotechnical Commission) Standard 60730-2-9 (edition 4:2015 consolidated with Amendment 1:2018). It supersedes the previous edition published in 2015 as CAN/CSA-E60730-2-9 (adopted IEC 60730-2-9:2008+A1:2011). At the time of publication, IEC 60730-2-9:2015+A1:2018 is available from IEC in English only. CSA Group will publish the French version when it becomes available from IEC.

For brevity, this Standard will be referred to as "CAN/CSA-E60730-2-9" throughout.

This Standard is intended to be used in conjunction with CAN/CSA-E60730-1:15, *Automatic electrical controls — Part 1: General requirements* (adopted IEC 60730-1:2013, with Canadian deviations).

This edition includes alignment with the text of CAN/CSA-E60730-1:15 and the following significant technical changes with respect to the previous edition:

a) modification of heating-freezing tests in Clause 12;
b) alignment of the EMC requirements in Clause H.26 to those in other part 2 standards; and
c) addition of requirements in Clause H.27 to cover class B and C control functions of temperature sensing controls.

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

This Standard was reviewed for Canadian adoption by the CSA Technical Committee on International Standards, under the jurisdiction of the CSA 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."

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This Standard is subject to review within five years from the date of publication, and suggestions for its improvement will be referred to the appropriate committee. The technical content of IEC and ISO publications is kept under constant review by IEC and ISO. 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.*

Canadian deviations

The following deviations are intended to meet Canadian product requirements and to align with the *Canadian Electrical Code, Part I*.

International Standard IEC 60730-2-9:2015+A1:2018 (edition 4.1) forms the basis for CAN/CSA-E60730-2-9, which contains the following deviations in addition to those shown in CAN/CSA-E60730-1:15.

[Replace all references to "IEC 60730-1" with "CAN/CSA-E60730-1"]

1 Scope and normative references

1.1 Scope

[Add the following paragraph]

This Standard applies to the safety of such equipment designed and constructed for installation and use in accordance with CSA C22.1, *Canadian Electrical Code, Part I*.

1.1 Normative references

[Replace IEC clause number "1.1" with "1.2"]

[Add the following]

Any reference to International Standards that are adopted as National Standards of Canada subsequent to the publication of CAN/CSA-E60730-2-9 shall be replaced by the relevant National Standard of Canada.

Where reference is made to CSA Group publications, such reference shall be considered to refer to the latest edition and all amendments published to that edition. This Standard refers to the following publications, and the years shown indicate the latest editions available at the time of printing:

CSA Group

C22.1-18
Canadian Electrical Code, Part I

CAN/CSA-C22.2 No. 0-10 (R2015)
General requirements — Canadian Electrical Code, Part II

CAN/CSA-C22.2 No. 0.17-00 (R2018)
Evaluation of properties of polymeric materials

C22.2 No. 130-16
Requirements for electrical resistance trace heating and heating device sets

CAN/CSA-E60730-1:15
Automatic electrical controls — Part 1: General requirements

NRCC (National Research Council Canada)
National Farm Building Code of Canada, 1995

2 Terms and definitions

2.2 Definitions of types of control according to purpose

[Add the following definition]

2.2.107A

appliance control
a control, other than a household range oven thermostat, that meets the required calibration tests

3 General requirements

[Replace this clause with the following]

This Clause of the Part 1 is applicable except as follows.

[Add the following clause]

3.1A

General requirements applicable to these products are provided in CAN/CSA-C22.2 No. 0.

7 Information

7.2 Methods of providing information

Table 1 – Required information and methods of providing information

[Replace the last sentence in Footnote 102 with the following]

In Canada, the use of mercury within any component of the controller is not allowed.

[Add the following clause]

7.2A Caution and warning markings

In Canada, caution and warning markings shall be in both English and French.

11 Constructional requirements

11.1 Materials

11.1.101 Parts containing liquid metal

[Replace the first paragraph with the following]

For **controls** declared under Table 1, requirement 106, parts of any **control** that contain sodium (Na), potassium (K), or both, shall be constructed of metal that has a tensile yield strength at least four times the circumferential (hoop) or other stress on the parts at a temperature 1,2 times the **maximum temperature** of the **sensing element**.

11.1.102 Material for non-bimetallic SODs

[Replace this clause with the following]

Insulating material used in **non-bimetallic SODs** as defined in this Standard shall comply with the requirements of IEC 60216-1 and CAN/CSA-C22.2 No. 0.17 and be suitable for the application.

17 Endurance

17.15 Single operation devices

17.15.1.3.1

[Replace the second paragraph with the following]

The sample is then subjected to 6000 cycles minimum, at rated current and voltage.

17.16 Test for particular purpose controls

17.16.102

[Replace this clause with the following]

Independently mounted **room thermostats** for **operation** above 30 V, which include a resistance load rating and which are intended for direct control of electric space-heating equipment, shall meet the requirements of Clauses 17.16.102.4 and 17.16.102.5.

17.16.105

[Replace this clause with the following]

In Canada, except as specified in the paragraph below, if a **control** has two or more electrical ratings (e.g., different currents at different voltages), it may be tested for not less than 25% of its declared endurance (if equal to or greater than 30 000 cycles) at each rating, but the total number of cycles on any one sample shall not be more than its declared endurance.

An **appliance control** or water heater thermostat having two or more noninductive electrical ratings or pilot duty ratings requiring tests shall be tested for the full number of cycles at each such rating. Any one sample shall not be tested for more than the required number of cycles.