UL 60730-2-5:2026

(IEC 60730-2-5:2013+A1:2017+A2:2021, MOD)

STANDARD FOR SAFETY

Automatic Electrical Controls – Part 2-5: Particular Requirements for Automatic Electrical Burner Control Systems

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UL Standard for Safety for Automatic Electrical Controls – Part 2-5: Particular Requirements for Automatic Electrical Burner Control Systems, UL 60730-2-5

Fourth Edition, Dated July 29, 2022

Summary of Topics

This revision of IEC 60730-2-5 dated July 13, 2026 includes the following changes in requirements:

– Revised Annex DVLL, Manufacturing and production testing.

– Revised Annex DVKK, Requirements for components of burner control systems; DVKK.4.1.3

UL 60730-2-5 is an adoption of IEC 60730-2-5, Edition 4.2 issued by the IEC January 2021. Please note that the National Difference document incorporates all the U.S. national differences.

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated October 3, 2025.

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July 29, 2022

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Preface

This is the harmonized CSA Group and ULSE standard for Automatic electrical controls – Part 2-5: Particular requirements for automatic electrical burner control systems. It is the second edition of CSA/ANSI Z21.20 • CSA C22.2 No. 60730-2-5 and the fourth edition of UL 60730-2-5. This edition of CSA/ANSI Z21.20 • CSA C22.2 No. 60730-2-5 supersedes the previous edition published in 2014 as ANSI Z21.20 • CAN/CSA-C22.2 No. 60730-2-5 and replaces ANSI Z21.20-2005, Automatic Gas Ignition Systems and Component, ANSI Z21.20a-2008, Automatic Gas Ignition Systems and Components – Addenda A, CAN/CSA-C22.2 No. 199-89, Combustion safety controls and solid-state igniters for gas- and oil-burning equipment and CAN1-6.4-M79, Automatic Gas Ignition Systems and Components. This edition of UL 60730-2-5 supersedes the previous edition published in 2014 and replaces the sixth edition of UL 372, Automatic Electrical Controls for Household and Similar Use – Part 2-5: Particular Requirements for Burner Ignition Systems and Components, and the fifth edition of UL 372, Primary Safety Controls for Gas- and Oil-Fired Appliances. This harmonized standard has been jointly revised on July 13, 2026. For this purpose, CSA Group and ULSE are issuing revision pages dated July 13, 2026.

This Standard is based on IEC Publication 60730-2-5, edition 4.2, Automatic electrical controls – Part 2- 5: Particular requirements for automatic electrical burner control systems, issued January 2021. IEC publication 60730-2-5 is copyrighted by the IEC.

This harmonized standard was prepared by CSA Group and ULSE. The efforts and support of Industry Associations are gratefully acknowledged.

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

This Standard was reviewed by the Z21/CSA Joint Subcommittee on Standards for Automatic Gas Controls, under the jurisdiction of the CSA Z21/83 Technical Committee on Performance and Installation of Gas-Burning Appliances and Related Accessories, the CSA Technical Committee on Gas Appliances and Related Accessories, and the CSA Strategic Steering Committee on Fuels and Appliances. It was also reviewed by the CSA Subcommittee on Automatic Controls for Household Use, under the jurisdiction of the CSA Technical Committee on Consumer and Commercial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety. It has been formally approved by the CSA Technical Committees and the Interprovincial/Territorial Gas Advisory Council. This standard has been developed in compliance with the Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group. This Standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: 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.

CSA/ANSI Z21.20 • CSA C22.2 No. 60730-2-5 is intended to be used in conjunction with CSA E60730-1:15, Amendment 1:2017 to CSA E60730-1:15, and Amendment 2:2021 to CSA E60730-1:15. The requirements for automatic electrical burner control systems are contained in this Part 2 Standard and CSA E60730-1 and its Amendments. Requirements of this Part 2 Standard, where stated, amend the requirements of CSA E60730-1 and its Amendments. Where a particular subclause of CSA E60730-1 is not mentioned in CSA C22.2 No. 60730-2-5, the CSA E60730-1 subclause applies.

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UL Standard 60730-2-5, Standard for Automatic Electrical Controls – Part 2-5: Particular Requirements for Automatic Electrical Burner Control Systems is to be used in conjunction with the fifth edition of UL 60730-1. The requirements for automatic electrical burner control systems are contained in this Part 2 Standard and UL 60730-1. Requirements of this Part 2 Standard, where stated, amend the requirements of UL 60730-1. Where a particular subclause of UL 60730-1 is not mentioned in UL 60730-2-5, the UL 60730-1 subclause applies.

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This standard adopts the IEC text with national differences. This standard is published as an equivalent standard for CSA Group and ULSE. An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental climatic, geographical, technological, or infrastructural factors, scientific justification, or the level of protection that the country considers appropriate. Presentation is word for word except for editorial changes.

All national differences from the IEC text are included in the CSA Group and ULSE versions of the standard. While the technical content is the same in each organization's version, the format and presentation may differ.

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Differences from the IEC are being added in order to address safety and regulatory situations present in Canada and the U.S.

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The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

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NATIONAL DIFFERENCES

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There are five types of National Differences as noted below. The difference type is noted on the first line of the National Difference in the standard. The standard may not include all types of these National Differences.

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D2 – These are National Differences from IEC requirements based on existing **safety practices**. These requirements reflect national safety practices, where empirical substantiation (for the IEC or national requirement) is not available or the text has not been included in the IEC standard.

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FOREWORD

INTERNATIONAL ELECTROTECHNICAL COMMISSION

AUTOMATIC ELECTRICAL CONTROLS – Part 2-5: Particular requirements for automatic electrical burner control systems

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

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This consolidated version of the official IEC Standard and its amendments has been prepared for user convenience.

IEC 60730-2-5 edition 4.2 contains the fourth edition (2013-11) [documents 72/922/FDIS and 72/929/RVD], its amendment 1 (2017-08) [documents 72/1084/FDIS and 72/1103/RVD] and its amendment 2 (2021) [documents 72/1259/FDIS and 72/1262/RVD].

This Final version does not show where the technical content is modified by amendments 1 and 2. A separate Redline version with all changes highlighted is available in this publication.

International Standard IEC 60730-2-5 has been prepared by IEC technical committee 72: Automatic electrical controls.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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This part 2-5 is intended to be used in conjunction with IEC 60730-1. It was established on the basis of the fifth edition:2013, including Amendment 1:2015 and Amendment 2:2020 of that publication. Consideration may be given to future editions of, or amendments to, IEC 60730-1.

This part 2-5 supplements or modifies the corresponding clauses in IEC 60730-1 so as to convert that publication into the IEC standard: Safety requirements for automatic electrical burner control systems.

Where this part 2-5 states "addition", "modification", or "replacement", the relevant requirement, test specification or explanatory matter in Part 1 should be adapted accordingly.

Where no change is necessary, this part 2-5 indicates that the relevant clause or subclause applies.

In the development of a fully international standard, it has been necessary to take into consideration the differing requirements resulting from practical experience in various parts of the world and to recognize the variation in national electrical systems and wiring rules.

The “in some countries” notes regarding differing national practices are contained in the following subclauses:

– 2.3.127

– 6.11

– 15.7

– 17.16.102.1

– H.26.11.101

– Table H.24, Note i

In this publication:

1) The following print types are used:

– Requirements proper: in roman type;

– *Test specifications: in italic type;*

– Explanatory matter; in small roman type;

– Words defined in Clause 2: **bold**.

2) Subclauses, notes, tables and figures which are additional to those in Part 1 are numbered starting from 101, additional annexes are lettered AA, BB, etc.

A list of all parts of the IEC 60730 series, under the general title Automatic electrical controls can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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101DV DE ***Modification of the sixth paragraph after Item 9) of the Part 2 IEC Foreword by replacing it with the following paragraph:***

This Part 2-5 is intended to be used in conjunction with the fifth edition of UL 60730-1 or the fifth edition of CSA E60730-1, and their Amendments. Requirements of this Part 2 Standard supplement or modify the requirements of UL 60730-1 and CSA E60730-1. Where a particular subclause of UL 60730-1 and CSA E60730-1 is not mentioned in this Part 2 Standard, that subclause applies as far as reasonable.

102DV DE ***Modification of the fourth dashed item of Item 1) of the paragraph starting with, "In this publication", by replacing it with the following:***

– words in SMALL ROMAN CAPITALS in the text are defined in clause 2.

103DV DE ***Modification to the Part 2 IEC Foreword by adding the following:***

The numbering system in the standard uses a space instead of a comma to indicate thousands and uses a comma instead of a period to indicate a decimal point. For example, 1 000 means 1,000 and 1,01 means 1.01.

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AUTOMATIC ELECTRICAL CONTROLS – Part 2-5: Particular requirements for automatic electrical burner control systems

1 Scope and normative references

This clause of Part 1 is applicable except as follows:

1.1 Scope

Replacement:

This part of IEC 60730 applies to automatic electrical BURNER CONTROL SYSTEMS for the AUTOMATIC CONTROL of burners for oil, gas, coal or other combustibles intended to be used

• for household and similar use,

• in shops, offices, hospitals, farms and commercial and industrial applications.

This International Standard is applicable

• to a complete BURNER CONTROL SYSTEM,

• to a separate PROGRAMMING UNIT,

• to a separate electronic high-voltage IGNITION SOURCE,

• to a separate FLAME DETECTOR and

• to a separate HIGH-TEMPERATURE OPERATION (HTO) DETECTOR.

• to a BURNER CONTROL SYSTEM intended to be used in warm air heating appliances (furnaces) where the appliance is equipped with an electromechanical differential pressure control to monitor the difference of the combustion air pressure (Type 2.AL). This pressure control provides a switch as an alternative to one of the two switching elements to directly de-energize the safety relevant terminals.

NOTE 1 Throughout this document, where it can be used unambiguously, the word "system" means "burner control system" and "systems" means "burner control systems".

NOTE 2 Throughout this document, the word "equipment" means "appliance and equipment."

This standard does not apply to thermoelectric flame supervision controls; thermoelectric flame supervision controls are covered by ISO 23551-6.

This document also applies to electrical BURNER CONTROL SYSTEMS intended exclusively for industrial process applications e.g. those applications covered by ISO TC 244 (ISO 13577).

This document applies to controls powered by primary or secondary batteries, requirements for which are contained within the standard, including Annex V.

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