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Automatic electrical controls - Part 2-5: Particular requirements for automatic electrical burner control systems

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/26

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English Version

Automatic electrical controls - Part 2-5: Particular requirements for automatic electrical burner control systems (IEC 60730-2-5:2026)

Dispositifs de commande électrique automatiques - Partie 2-5: Exigences particulières pour les systèmes de commande électrique automatiques des brûleurs (IEC 60730-2-5:2026)

Automatische elektrische Regel- und Steuergeräte für den Hausgebrauch und ähnliche Anwendungen - Teil 2-5: Besondere Anforderungen an automatische elektrische Brenner-Steuerungs- und Überwachungssysteme (IEC 60730-2-5:2026)

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Ref. No. EN IEC 60730-2-5:2026 E

European foreword

The text of document 72/1530/FDIS, future edition 5 of IEC 60730-2-5, prepared by TC 72 "Automatic electrical controls" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60730-2-5:2026.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2027-06-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2029-06-30

This document supersedes EN 60730-2-5:2015 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document is read in conjunction with EN IEC 60730-1.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60730-2-5:2026 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60127-1:2023	NOTE	Approved as EN IEC 60127-1:2024 (not modified)
IEC 60730-2-6	NOTE	Approved as EN IEC 60730-2-6
IEC 60947-1:2020	NOTE	Approved as EN IEC 60947-1:2021 (not modified)
IEC 62282-3-100	NOTE	Approved as EN IEC 62282-3-100

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
Addition:				
IEC 60068-2-6	-	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
ISO/IEC 80079-20-1	2017	Explosive atmospheres - Part 20-1: Material characteristics for gas and vapour classification - Test methods and data	EN ISO/IEC 80079-20-1	2019

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Automatic electrical controls -
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IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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CONTENTS

FOREWORD ... 3
1 Scope ... 6
2 Normative references ... 7
3 Terms and definitions ... 8
4 General ... 15
5 Required technical information ... 16
6 Protection against electric shock ... 18
7 Provision for protective earthing ... 19
8 Terminals and terminations ... 19
9 Constructional requirements ... 20
10 Threaded parts and connections ... 28
11 Creepage distances, clearances and distances through solid insulation ... 28
12 Components ... 29
13 Fault assessment on electronic circuits ... 29
14 Moisture and dust resistance ... 30
15 Electric strength and insulation resistance ... 30
16 Heating ... 31
17 Manufacturing deviation and drift ... 31
18 Environmental stress ... 31
19 Endurance ... 32
20 Mechanical strength ... 35
21 Resistance to heat, fire and tracking ... 36
22 Resistance to corrosion ... 36
23 Electromagnetic compatibility (EMC) requirements – Emission ... 36
24 Normal operation ... 36
25 Electromagnetic compatibility (EMC) requirements – Immunity ... 36
26 Abnormal operation tests ... 36
Annex H (normative) Requirements related to functional safety ... 37
Annex J (normative) Requirements for thermistor elements and controls using thermistors ... 49
Annex Q (informative) Regional differences relevant for the member countries of Cenelec ... 50
Annex R (informative) National differences relevant in the United States of America ... 51
Annex S (informative) National differences relevant in Japan ... 52
Annex T (informative) National differences relevant in Canada ... 53
Annex AA (informative) Functional characteristics of burner control systems to be specified by the relevant appliance standards, as applicable ... 54
Bibliography ... 55

Figure 101 – Pulse spark generation ... 19
Figure 102 – Typical installation of the independent combustion air supply for room independent operation ... 28

Figure H.101 – Voltage variation test 44

Table 1 – Required technical information and methods of providing these information 16
Table H.1 – Additional items to Table 1 37
Table H.101 – Timing of short-term supply voltage variations 43
Table H.102 – Test levels for electrostatic discharge 46
Table AA.1 – Functional characteristics of burner control systems to be specified by the relevant appliance standards, as applicable 54

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Automatic electrical controls - Part 2-5: Particular requirements for automatic electrical burner control systems

FOREWORD

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

This fifth edition cancels and replaces the fourth edition published in 2013, Amendment 1:2017 and Amendment 2:2021. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

Adoption of IEC 60730-1:2022 with all of its significant changes to IEC 60730-1:2013, including Amendment 1:2015 and Amendment 2:2020.

The text of this International Standard is based on the following documents:

Draft	Report on voting
72/1530/FDIS	72/1539/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This part 2-5 is intended to be used in conjunction with IEC 60730-1. It was established on the basis of the sixth edition of that standard. 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: Particular 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.

When a particular clause or subclause of Part 1 is not mentioned in this part 2, that 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 reader's attention is drawn to the fact that Annex Q, Annex R, Annex S and Annex T list all of the "in-some-country" clauses on differing practices of a less permanent nature relating to the subject of this document.

In this publication, the following print types are used:

– requirements proper: in roman type;
– *test specifications: in italic type*;
– explanatory matter: in smaller roman type;
– defined terms: **bold type**.

Subclauses, notes or items 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 this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

– reconfirmed,
– withdrawn, or
– revised.

1 Scope

This clause of Part 1 is replaced by the following:

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;

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

– for equipment that is used by the public, such as equipment intended to be used in shops, offices, hospitals, farms and commercial and industrial applications;

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

EXAMPLE 1 Controls for commercial catering, heating and air-conditioning equipment.

– that are **smart enabled controls**;

EXAMPLE 2 Remote interfaces/control of burner operations.

– that are AC or DC powered controls with a **rated voltage** not exceeding 690 V AC or 600 V DC;
– used in, on, or in association with equipment that use electricity, gas, oil, solid fuel, solar thermal energy, etc., or a combination thereof;
– utilized as part of a control system or controls which are mechanically integral with multifunctional controls having non-electrical outputs;
– using **NTC** or **PTC thermistors** and to discrete **thermistors**, requirements for which are contained in Annex J;
– that are mechanically or electrically operated, responsive to or controlling such characteristics as temperature, pressure, passage of time, humidity, light, electrostatic effects, flow, or liquid level, current, voltage, acceleration, or combinations thereof;
– as well as manual controls when such are electrically and/or mechanically integral with automatic controls.

NOTE 3 Requirements for manually actuated mechanical switches not forming part of an automatic control are contained in IEC 61058-1-1.

This document 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.

This document does not apply to thermoelectric flame supervision controls; thermoelectric flame supervision controls are covered by ISO 23551-6:2021.

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 series).

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

This document applies to

– the inherent safety of automatic electrical **burner control systems**, and
– functional safety of automatic electrical **burner control systems**,
– automatic electrical **burner control systems** where the performance (for example the effect of EMC phenomena) of the product can impair the overall safety and performance of the controlled system,
– the operating values, operating times, and operating sequences where such are associated with burner safety and to the testing of automatic electrical **burner control systems** used in, on, or in association with, burners.

NOTE 4 Requirements for specific **operating values**, **operating times** and **operating sequences** are given in the standards for appliances and equipment.

This document specifies the requirements for construction, operation and testing of automatic electrical **burner control systems** used in, on, or in association with an equipment.

This document applies also to systems

– incorporating electronic devices,
– using **NTC** or **PTC thermistors**, additional requirements for which are contained in Annex J,
– to the electrical and functional safety of controls capable of receiving and responding to communications signals. The signals can be transmitted to or received from external units, connected wired or wireless, that can or can not be part of the **burner control system**.

This document does not

– take into account the response value of an automatic action of a control, if such a response value is dependent upon the method of mounting the control in the equipment. Where a response value is of significant purpose for the protection of the user, or surroundings, the value defined in the appropriate equipment standard or as determined by the manufacturer will apply;
– address the integrity of the output signal to the network devices, such as interoperability with other devices unless it has been evaluated as part of the control system.

2 Normative references

This clause of Part 1 is applicable except as follows:

Addition:

IEC 60068-2-6, *Environmental testing - Part 2: Tests - Test Fc: Vibration (sinusoidal)*

ISO/IEC 80079-20-1:2017, *Explosive atmospheres - Part 20-1: Material characteristics for gas and vapour classification - Test methods and data*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN