



NSAI
Standards

Irish Standard
I.S. EN 60730-2-5:2015

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

I.S. EN 60730-2-5:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

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EUROPEAN STANDARD

EN 60730-2-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2015

ICS 97.120

Supersedes EN 60730-2-5:2002

English Version

Automatic electrical controls -
Part 2-5: Particular requirements for automatic electrical burner
control systems
(IEC 60730-2-5:2013 , modified)

Dispositifs de commande électrique automatiques -
Partie 2-5: Exigences particulières pour les systèmes de
commande électrique automatiques des brûleurs
(IEC 60730-2-5:2013 , modifiée)

Automatische elektrische Regel- und Steuergeräte für den
Hausgebrauch und ähnliche Anwendungen -
Teil 2-5: Besondere Anforderungen an automatische
elektrische Brenner-Steuerungs- und
Überwachungssysteme
(IEC 60730-2-5:2013 , modifiziert)

This European Standard was approved by CENELEC on 2014-11-17. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN 60730-2-5:2015) consists of the text of IEC 60730-2-5:2013 prepared by IEC/TC 72 "Automatic electrical controls", together with the common modifications prepared by CLC/TC 72 "Automatic controls for household use".

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) 2015-08-27
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-11-17

This document supersedes EN 60730-2-5:2002.

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60730-2-5:2013 was approved by CENELEC as a European Standard with agreed common modifications.

COMMON MODIFICATIONS

Foreword	Delete
2	Definitions
2.3.127	Delete Note 1 to entry.
6	Classification
6.11	Replace the text of the addition by the following: The minimum value is 250 000 automatic cycles.

15 Manufacturing deviation and drift

15.7 Delete the note.

17 Endurance

17.16.102.1 a) **Delete** the note.

Annexes

Annex H

H.26.10 **Delete** up to and included H.26.10.5.101.6 and **replace** by “Void”:

H.26.11.103 **Delete** Note 2.

Table H.21 In Note 7, **delete** the last sentence of the modification “In Canada and in the USA, the nominal cycle is 100 000.”.

H.27.1.2.3 **Delete** the text: “The modification applies to the French text only.”

Add Annexes ZA, ZB, ZC and ZZ as follows.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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.cenelec.eu.

This annex of EN 60730-1:2011 is applicable except as follows:

Addition:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-6	-	Environmental testing Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
IEC 61643-11	-	Low-voltage surge protective devices Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods	EN 61643-11	-

Annex ZB
(normative)

Special national conditions

This annex of EN 60730-1:2011 is applicable.

There are no special conditions (snc) causing a deviation from this European Standard other than those listed in Annex ZB to EN 60730-1:2011.

Annex ZC (informative)

A-deviations

This annex of EN 60730-1:2011 is applicable except as follows:

Addition:

Clause	Deviation
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Annex H	Austria: Bundesgesetzblatt 19. Verordnung: Luftreinhalteverordnung 1989 (LVR-K 1989, air clean keeping decree for vessel equipment), last valid modification Nov. 4, 1997 by 324. Verordnung: Änderung der Luftreinhalteverordnung für Kesselanlagen 1989 (modification of LVR-K 1989, air clean keeping decree for vessel equipment):
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§ 8(1) Werden Dampfkesselanlagen mit Brennern ausgerüstet, die in den Anwendungsbereich nachstehender ÖNORMen fallen, so sind diese ÖNORMen verbindlich anzuwenden:

(Whenever steam boilers are equipped with burners concerned by the following standards, these standards have to be applied:)

- ÖNORM EN 267/1991: Atomizing oil burners of monobloc type-Testing;
- ÖNORM M 7540-1/1994: Atomizing oil burners of monobloc type for the heating fuels "fuel oil light", "fuel oil medium" and "fuel oil heavy" - Terminology, requirements, testing, marking of conformity;
- ÖNORM M 7445/1984: Forced-air gasburners;
- ÖNORM M 7445/1990: Fan-assisted gas burners with low NO_x-emission; nitrogen oxide measurement."

Annex ZZ
(informative)

Coverage of Essential Requirements of EU Directives

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers all relevant essential requirements as given in Article 1 of Annex I of the EC Directive EMC (2004/108/EC).

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive concerned.

WARNING: Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

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IEC 60730-2-5

Edition 4.0 2013-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Dispositifs de commande électrique automatiques –
Partie 2-5: Exigences particulières pour les systèmes de commande électrique
automatiques des brûleurs**





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IEC 60730-2-5

Edition 4.0 2013-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Dispositifs de commande électrique automatiques –
Partie 2-5: Exigences particulières pour les systèmes de commande électrique
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

The text of this standard is based on the following documents:

FDIS	Report on voting
72/922/FDIS	72/929/RVD

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

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

This part 2-5 is intended to be used in conjunction with IEC 60730-1. It was established on the basis of the fourth edition (2010) of that publication. Consideration may be given to future editions of, or amendments to, IEC 60730-1.

The title of IEC 60730-2-5 Ed. 4 has been updated to the title of IEC 60730-1 Ed. 5.0. However, IEC 60730-2-5 Ed. 4.0 has not been updated in accordance with the technical requirements in IEC 60730-1 Ed. 5.0.

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.26.11.103
- Table H.21, Note 7

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 this publication 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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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 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 for household and similar use including heating, air conditioning and similar use.

This part 2-5 is applicable to a complete burner control system and to a separate **programming unit**. This part 2-5 is also applicable to a separate electronic high-voltage **ignition source** and to a separate **flame detector**.

NOTE Separate **ignition devices** (electrodes, **pilot** burners, etc.) are not covered by this part 2-5 unless they are submitted as part of a burner control system. Requirements for separate ignition transformers are contained in IEC 60989.

Throughout this part 2-5, where it can be used unambiguously, the word "system" means "burner control system" and "systems" means "burner control systems".

Systems utilizing thermoelectric flame supervision are not covered by this part 2-5.

1.1.1 This part 2-5 applies to the inherent safety, to the manufacturer's declared **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 Requirements for specific **operating values, operating times and operating sequences** are given in the standards for appliances and equipment.

Systems for equipment not intended for normal household use, but which nevertheless may be used by the public, such as equipment intended to be used by laymen in shops, in light industry and on farms, are within the scope of this part 2-5.

This part 2-5 applies to systems using NTC or PTC thermistors, additional requirements for which are contained in Annex J.

This part 2-5 does not apply to systems designed exclusively for industrial applications.

1.1.2 This part 2-5 applies to **manual controls** when such are electrically and/or mechanically integral with **automatic controls**.

NOTE Requirements for manual switches not forming part of an **automatic control** are contained in IEC 61058-1.

Throughout this part 2-5, the word "equipment" means "appliance and equipment".

1.2 Replacement:

This part 2-5 applies to systems with a rated voltage not exceeding 660 V and with a rated current not exceeding 63 A.

1.3 Replacement:

This part 2-5 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 household equipment standard or as determined by the manufacturer applies.

NOTE This part 2-5 includes systems responsive to flame properties.

1.4 Replacement:

This part 2-5 applies also to systems incorporating **electronic devices**, requirements for which are contained in Annex H.

1.5 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)*

IEC 61643-11, *Low-voltage surge protective devices – Part 11: Surge protective devices connected to low-voltage power systems – Requirements and test methods*

2 Definitions

This clause of Part 1 is applicable except as follows:

2.2 Definitions of types of control according to purpose

Additional definitions:

2.2.101

burner control system

system which includes a **programming unit**, a **flame detector** and may include an **ignition source** and/or **ignition device** and which monitors the **operation** of fuel burners

Note 1 to entry: The various functions of the system may be in one or more housings.

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