



SLOVENSKI STANDARD

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Automatic electrical controls for household and similar use -- Part 2-5: Particular requirements for automatic electrical burner control systems

Automatic electrical controls for household and similar use -- Part 2-5: Particular requirements for automatic electrical burner control systems

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

Dispositifs de commande électrique automatiques à usage domestique et analogue -- Partie 2-5: Règles particulières pour les systèmes de commande électrique automatiques des brûleurs

Ta slovenski standard je istoveten z: EN 60730-2-5:2002

ICS:

97.120	Avtomatske krmilne naprave za dom	Automatic controls for household use
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EUROPEAN STANDARD

EN 60730-2-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2002

ICS 97.120

Supersedes EN 60730-2-5:1995 + A1:1996 + A2:1998

English version

Automatic electrical controls for household and similar use
Part 2-5: Particular requirements for automatic
electrical burner control systems
(IEC 60730-2-5:2000, modified)

Dispositifs de commande électrique
automatiques à usage domestique
et analogue
Partie 2-5: Règles particulières pour
les systèmes de commande électrique
automatiques des brûleurs
(CEI 60730-2-5:2000, 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 60730-2-5:2000, modifiziert)

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This European Standard was approved by CENELEC on 2001-12-04. 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 Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of the International Standard IEC 60730-2-5:2000, prepared by IEC TC 72, Automatic controls for household use, together with the common modifications prepared by the Technical Committee CENELEC TC 72, Automatic controls for household use, was submitted to the formal vote and was approved by CENELEC as EN 60730-2-5 on 2001-12-04.

This European Standard supersedes EN 60730-2-5:1995 + corrigendum July 1997 + A1:1996 + A1:1996/corrigendum July 1997 + A2:1998 + A2:1998/corrigendum January 1998.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement dop 2002-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn dow 2008-12-01

This Part 2-5 is to be used in conjunction with EN 60730-1:1995, Automatic electrical controls for household and similar use - Part 1: General requirements, and its amendments. Consideration may be given to future editions of EN 60730-1.

This Part 2-5 supplements or modifies the corresponding clauses of EN 60730-1 so as to convert it into the European Standard: Particular requirements for automatic electrical burner control systems.

Where a particular clause or subclause of Part 1 is not mentioned in this Part 2-5, that clause or subclause applies as far as is reasonable. Where this Part 2-5 states "addition", "modification" or "replacement", the relevant text of Part 1 is to be adapted accordingly.

Where reference is made to other international or harmonized standards, the edition of that standard quoted in annex ZA (normative) is applicable.

There are no special national conditions (snc) causing a deviation from this European Standard other than those listed in annex ZB of EN 60730-1.

National deviations from this European Standard are listed in annex ZC (informative) and are in addition to those in EN 60730-1:1995.

In this standard:

- 1) The following print types are used:
 - Requirements proper: in roman type;
 - *Test specifications: in italic type;*
 - Explanatory matter: in small roman type.
- 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.

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annexes H, AA and ZA are normative and annexes BB and ZC informative.

Annexes ZA and ZC have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60730-2-5:2000 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Foreword **Delete**

6 **Classification**

6.11 **Replace** the text of the addition by the following:

The minimum value is 250 000 automatic cycles.

Replace "6.11.4 to 6.11.12 Not applicable" by "6.11.1 to 6.11.12 Not applicable".

11 **Constructional requirements**

11.3.105 **Delete** the 'in some countries' clauses following 11.3.105.6.

15 **Manufacturing deviation and drift**

15.7 **Delete** the 'in some countries' note.

17 **Endurance**

17.16.102.1a) **Delete** the 'in some countries' note.

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Annexes

Annex H

H.26.9 **Delete** the 'in some countries' note.

H.26.10 **Replace** with 'H 26.10 Void'.

H.26.11 **Delete** the 'in some countries' note.

H.27.1.3a) **Delete** the note.

H.26.12.5 **Replace** the table by:

Frequency	Severity level	
	1	2
9 kHz to ≤ 27 MHz	Under consideration	
> 27 MHz to ≤ 500 MHz	3 V/m	10 V/m
> 500 MHz to ≤ 1 GHz	Under consideration	

Annex J

J.20 **Delete**

Annex ZA
(normative)**Normative references to international publications
with their corresponding European publications****Additions to annex ZA of EN 60730-1:1995****Add** under IEC publications:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-6 + corr. March	1995 1995	Environmental testing – Part 2: Tests – Test Fc: Vibration (sinusoidal)	EN 60068-2-6	1995
IEC 60384-16	1982	Fixed capacitors for use in electronic equipment – Part 16: Sectional specification: Fixed metallized polypropylene film dielectric d.c. capacitors		
IEC 60989	1991	Separating transformers, autotransformers, variable transformers and reactors		

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Annex ZB
(normative)

Special national conditions

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

Annex ZC
(informative)

A-deviations

Addition:

Clause Deviation

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):

§ 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 NOx-emission; nitrogen oxide measurement."
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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

60730-2-5

Troisième édition
Third edition
2000-04

**Dispositifs de commande électrique automatiques
à usage domestique et analogue –**

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

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**Automatic electrical controls for household
and similar use –**

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

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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Pour prix, voir catalogue en vigueur
For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**AUTOMATIC ELECTRICAL CONTROLS FOR HOUSEHOLD
AND SIMILAR USE –**
**Part 2-5: Particular requirements for automatic electrical
burner control systems**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

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

This third edition cancels and replaces the second edition published in 1993, amendment 1 (1996) and amendment 2 (1997) and constitutes a technical revision.

The text of this standard is based on the second edition, amendments 1 and 2 and the following documents:

FDIS	Report on voting
72/430/FDIS	72/447/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 3.

This part 2-5 is intended to be used in conjunction with IEC 60730-1. It was established on the basis of the second edition (1993) of IEC 60730-1 and its amendments 1 (1994) and 2 (1997). 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 practice are contained in the following subclauses:

- 6.11
- 15.7
- 17.16.102.1
- H.26.9
- H.26.10
- H.26.11

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 - Explanatory matter; in small roman type.
- 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.

The committee has decided that the contents of this publication will remain unchanged until 2002-04. At this date, the publication will be:

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

AUTOMATIC ELECTRICAL CONTROLS FOR HOUSEHOLD AND SIMILAR USE –

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.

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.

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.

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.

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

1.4 Replacement: iTeh STANDARD PREVIEW

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

1.5 Normative references: standards.iteh.ai/catalog/standards/sist/e3b6ec3f-2a8f-4a9d-86ae-74082f433783/sist-en-60730-2-5-2002 SIST EN 60730-2-5:2002

This clause of part 1 is applicable except as follows:

Addition:

IEC 60068-2-6:1995, *Environmental testing – Part 2: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60384-16:1982, *Fixed capacitors for use in electronic equipment – Part 16: Sectional specification: Fixed metallized polypropylene film dielectric d.c. capacitors*

IEC 60989:1991, *Separating transformers, autotransformers, variable transformers and reactors*

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

The various functions of the system may be in one or more housings.

2.2.102

flame detector

device which provides the programming unit with a signal indicating the presence or absence of flame

It includes the flame sensor and may include an amplifier and a relay for signal transmission. The amplifier and relay may be in its own housing or combined with the programming unit.

2.2.103

flame sensor

device which senses the flame and provides the input signal to the flame detector amplifier

Examples are optical sensors and flame electrodes (flame rods)

2.2.104

ignition source

electrical or electronic system component which provides energy to an ignition device

It may be separated from or incorporated in the programming unit. Examples are ignition transformers and electronic high-voltage generators.

2.2.105

ignition device

device mounted on or adjacent to a burner for igniting fuel at the burner

Examples are pilot burners, spark electrodes and hot surface igniters.

2.2.106

programming unit

device which controls the burner operation in a declared sequence from start-up to shutdown within declared timings and in response to signals from regulating, limiting and monitoring devices

2.2.107

multitry system

system that allows more than one valve open period during its declared operating sequence

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