SLOVENSKI STANDARD
SIST EN 60730-2-5:2015/A1:2019

01-junij-2019

Avtomatske električne krmilne naprave - 2-5. del: Posebne zahteve za avtomatske električne krmilne sisteme gorilnikov

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

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

Ta slovenski standard je istoveten z: **EN 60730-2-5:2015/A1:2019**

ICS:

97.120	Avtomatske krmilne naprave za dom	Automatic controls for household use

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EUROPEAN STANDARD

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English Version

Automatic electrical controls - Part 2-5: Particular requirements for automatic electrical burner control systems (IEC 60730-2-5:2013/A1:2017)

Dispositifs de commande électrique automatiques - Partie 2-5: Exigences particulières pour les systèmes de commande électrique automatiques des brûleurs (IEC 60730-2-5:2013/A1:2017)

Automatische elektrische Regel- und Steuergeräte - Teil 2-5: Besondere Anforderungen an automatische elektrische Brenner-Steuerungs- und Überwachungssysteme (IEC 60730-2-5:2013/A1:2017)

This amendment A1 modifies the European Standard EN 60730-2-5:2015; it was approved by CENELEC on 2018-12-13. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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.

This amendment 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

The text of document 72/1084/FDIS, future IEC 60730-2-5/A1, prepared by IEC/TC 72 "Automatic electrical controls" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60730-2-5:2015/A1:2019.

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) 2019-10-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-04-12

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 has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

Endorsement notice

The text of the International Standard IEC 60730-2-5:2013/A1:2017 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 standards indicated:

IEC 60947 (series)	NOTE	Harmonized as EN 60947 (series)
IEC 62282-3-100	NOTE	Harmonized as EN 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.cenelec.eu.

Add the following references:

Publication	Year	Title	EN/HD	Year
IEC 60079-20-1	2010	Explosive atmospheres - Part 20-1: Material characteristics for gas and vapour classification - Test methods and data	EN 60079-20-1	2010
ISO 23551-6	2014	Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 6: Thermoelectric flame supervision controls		-
Replacement:				
IEC 60127-1	2006	Miniature fuses - Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links	EN 60127-1	2006

IEC 60730-2-5

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INTERNATIONAL STANDARD

AMENDMENT 1

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

INTERNATIONAL
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COMMISSION

ICS 97.120

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FOREWORD

This amendment has been prepared by IEC technical committee 72: Automatic electrical controls.

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

FDIS	Report on voting
72/1084/FDIS	72/1103/RVD

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website 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.

A bilingual version of this publication may be issued at a later date.

1 Scope and normative references

Replace Subclause 1.1 by the following:

1.1 Scope

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**.

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).

1.1.1 This document applies to the inherent safety, to the 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.

1.1.2 This document applies to AC or DC powered systems with a rated voltage not exceeding 660 V AC or 600 V DC.

1.1.3 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 applies.

1.1.4 This document applies also to systems incorporating **electronic devices**, requirements for which are contained in Annex H.

1.1.5 This document applies to systems using NTC or PTC thermistors, additional requirements for which are contained in Annex J.

1.1.6 This document includes systems responsive to flame properties and temperature for HTO.

Delete Subclauses 1.2, 1.3 and 1.4.

1.5 *Renumber this subclause as follows:*

1.2 Normative references

Delete reference to IEC 61643-11.

Add the following new references to the existing list:

IEC 60079-20-1:2010, *Explosive atmospheres – Part 20-1: Material characteristics for gas and vapour classification – Test methods and data*

ISO 23551-6:2014, *Safety and control devices for gas burners and gas-burning appliances – Particular requirements – Part 6: Thermoelectric flame supervision controls*

Add the following instruction:

Replacement:

IEC 60127-1:2015, *Miniature fuses – Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links*

2 Definitions

Replace the title of Clause 2 by the following:

2 Terms and definitions

Add, after 2.2 Definitions of types of control according to purpose, the following note:

NOTE Definition 2.2.23 is not applicable.

2.2.101
burner control system

Replace the existing definition by the following:

system which includes a **programming unit**, a **flame detector** or, if applicable, an **HTO 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.

Add the following new terms and definitions:

2.2.108
HTO detector
device which provides the **programming unit** with a signal indicating presence or absence of **HTO**

Note 1 to entry: It includes the **HTO-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**.

2.2.109
HTO-sensor
device which senses the temperature of a surface or a medium within the combustion chamber which is in direct contact with a flammable fuel-air mixture and provides a signal indicating presence or absence of **HTO**

2.2.110
auto-ignition temperature
AIT
lowest temperature (of a hot surface or the environment) at which an ignition of a flammable fuel/air mixture occurs

[SOURCE: IEC 60079-20-1:2010,3.3, modified : "or the environment" has been added in the parenthesis, "at which under specified test conditions" has been deleted and " flammable gas or vapour in mixture with air or air/inert gas" has been replaced by " flammable fuel/air mixture"]

2.2.111
high-temperature operation
HTO
operation on the basis of **auto-ignition temperature** which assures ignition and burning of fuel

Note 1 to entry: **High-temperature operation** is used e.g. in fuel cells (IEC 62282-3-100) and in industrial furnaces and associated processing equipment (ISO 13577) where ignition and burning is detected by means of sensing the temperature.

Add the following new definition 2.3.32:

2.3.32
safety shut-down

Replacement:

de-energization of the main fuel flow means as the result of the action of a limiter, a cut-out or the detection of an internal **fault** of the system

Note 1 to entry: **Safety shut-down** may include additional actions by the system.

2.3.107

Add "**flame failure response time**" *below the term* "**flame failure lock-out time**".

2.3.117

Add "**proved igniter system**" *below the term* "**proved igniter**".

2.3.121
running position

Replace the definition by the following:

position denoting that the main burner flame is established and supervised, or the burner is in **HTO** and supervised

2.3.122

Add "Void" *after term number and delete the term and definition.*

Add the following new terms and definitions:

2.3.132
HTO detector response time
period of time between the temperature falling below the defined temperature limit for **HTO** and the signal indicating the absence of **HTO**

2.3.133
HTO detector operating characteristics
that function of the **HTO detector** which indicates absence or presence of **HTO** as the output signal of the **HTO detector** relating to the input signal

Note 1 to entry: Normally the input signal is provided by a **HTO-sensor**.

2.3.134
HTO response time
period of time between the signal indicating absence of **HTO** and proceeding to **safety shut-down** or to switch over to flame supervision

2.3.135
HTO signal
output signal of the **HTO detector**

4 General notes on tests

4.2.1

Replace the word "inclusive" *by the words* "including the relevant annexes" *in the third sentence between the words "Clauses 18 to 26" and* "may" to read *"the tests of Clauses 18 to 26 including the relevant annexes".*