



SLOVENSKI STANDARD
SIST EN 60730-1:1999/A1:1999
01-julij-1999

Automatic electrical controls for household and similar use -- Part 1: General requirements. Amendment A1 (IEC 60730-1:1986/A1:1990)

Automatic electrical controls for household and similar use -- Part 1: General requirements

Automatische elektrische Regel- und Steuergeräte für den Hausgebrauch und ähnliche Anwendungen -- Teil 1: Allgemeine Anforderungen

Dispositifs de commande électrique automatiques à usage domestique et analogue -- Partie 1: Règles générales

[SIST EN 60730-1:1999/A1:1999](https://standards.iteh.ai/catalog/standards/sist/88242195-cf1b-4782-a62b-b2a9ee5f6baf/sist-en-60730-1-1999-a1-1999)

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Ta slovenski standard je istoveten z: EN 60730-1:1991/A1:1991

ICS:

97.120	Avtomatske krmilne naprave za dom	Automatic controls for household use
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SIST EN 60730-1:1999/A1:1999 **en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60730-1/A1

May 1991

UDC 681.521.7:697.1/7:628.8:64.06-83

Descriptors: Control, definition, requirement, classification, construction, test

English version

**Automatic electrical controls for household
and similar use**
Part 1: General requirements
(Amendment No. 1:1990 to IEC 730-1:1986, modified)

Dispositifs de commande électrique
automatiques à usage domestique et
analogue
Première partie: Règles générales
(Modification n° 1:1990 à la
CEI 730-1:1986, modifiée)

Automatische elektrische Regel- und
Steuergeräte für den Hausgebrauch
und ähnliche Anwendungen
Teil 1: Allgemeine Anforderungen
(Änderung Nr. 1:1990 zu
IEC 730-1:1986, modifiziert)

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[SIST EN 60730-1:1999/A1:1999](https://standards.iteh.ai/catalog/standards/sist/88242195-cf1b-4782-a62b-)

<https://standards.iteh.ai/catalog/standards/sist/88242195-cf1b-4782-a62b->

This amendment A1 modifies the European Standard EN 60730-1:1991. It was approved by CENELEC on 11 September 1990. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, 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 CENELEC questionnaire procedure, performed for finding out whether or not amendment No. 1:1990 to the International Standard IEC 730-1:1986 could be accepted without textual changes, has shown that some common modifications were necessary for the acceptance as amendment to the European Standard.

The reference document, together with the common modifications prepared by the CENELEC Technical Committee TC 72: Automatic controls for household use, was submitted to the CENELEC members for formal vote.

The text of the draft was approved by CENELEC as amendment A1 on 11 September 1990.

The following dates were fixed:

- latest date of publication of
an identical national standard (dop) 1992-07-01
- latest date of withdrawal of
conflicting standards (dow) 1995-07-01

This document supplements or modifies the corresponding clauses of amendment No. 1:1990 to IEC 730-1:1986, so as to convert it into amendment A1 to EN 60730-1.

Subclauses which are in addition to those in the IEC Standard 730-1 are numbered 501, 502 etc. New annexes are numbered ZA, ZB etc.

Special national conditions (snc) causing a deviation from this amendment are listed in annex ZA (normative) which forms part of this standard.

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

NOTE: In this document, the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type;
- instructions for modification of the reference document: **in bold type.**

Endorsement notice

The text of amendment No. 1:1990 to the International Standard IEC 730-1:1986 was approved by CENELEC as an amendment to the European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Contents **Delete** reference to appendices C, D, and E.
Preface **Delete.**

7 Information

Table 7.2 **Add** "if more than 20K above T_{max} " to item 23.
Delete note 9 and the annotation in the table.

7.2.9 **Replace** " \perp " by " $\textcircled{\perp}$ " or " \perp "

7.4.3 **Add:**

Refer snc.

7.4.3.2 **Delete** all three explanation paragraphs.

Add:

Refer snc. [SIST EN 60730-1:1999/A1:1999](https://standards.iteh.ai/catalog/standards/sist/88242195-cf1b-4782-a62b-62a9cc510ba/sist-en-60730-1-1999-a1-1999)

7.4.5 **Replace** "thermal links" by "non-resettable thermal cut-outs" (in three places).

Appendices C, D, E

Delete.

Appendix H REQUIREMENTS FOR ELECTRONIC CONTROLS

H25 **Replace** "IEC Publication 555" by "EN 60555-1".

H27.1.3 **Delete** the explanation paragraph.

Replace "IEC Publication 65" by "HD 195 S6" (in two places).

H27.1.3(a) **Delete** the explanation paragraph.

Annex ZA (normative)**Special national conditions (snc)**

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. If it affects harmonization, it forms part of the European Standard.

For the countries for which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

7.4.3 United Kingdom

Add to the requirement:

Terminals intended exclusively for a live external conductor shall be indicated by the letter "L".

7.4.3.2 United Kingdom

Add to the requirement:

The letter "L" shall not be used except as indicated above.

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[SIST EN 60730-1:1999/A1:1999](https://standards.iteh.ai/standards/EN/60730-1:1999/A1:1999)

<https://standards.iteh.ai/standards/EN/60730-1:1999/A1:1999>
Annex ZB (normative)

**Other international publications quoted in this standard
with the references of the relevant European publications**

Add the following to the list of other international publications quoted:

<u>IEC Publication</u>	<u>Date</u>	<u>Title</u>	<u>EN/HD</u>	<u>Date</u>
IEC 384-14	1981	Fixed capacitors for radio interference suppression — Selection of methods of test and general requirements	—	—
IEC 555-1	1982	Disturbances in supply systems caused by household appliances and similar electrical equipment	EN 60555-1	1987

NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

**CEI
IEC
730-1**

Modification N° 1
Amendment No. 1
1990-02

Modification n° 1 à la Publication 730-1 (1986)

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

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Première partie: Règles générales

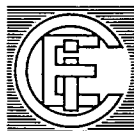
Amendment No. 1 to Publication 730-1 (1986)

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

Part 1: General requirements

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PREFACE

This amendment has been prepared by IEC Technical Committee No. 72: Automatic Controls for Household Use.

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

Six Months' Rule	Reports on Voting
72(CO)21 72(CO)23	72(CO)30 72(CO)32

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

CONTENTS

Add the following after Clause 23:

24. Components ...

25. Normal operation ...

26. Operation with mains-borne perturbations ...

27. Abnormal operation ...

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Add the following after Appendix B: [SIST EN 60730-1:1999/A1:1999](https://standards.iteh.ai/catalog/standards/sist/88242195-cf1b-4782-a62b-b2a9ee5f6baf/sist-en-60730-1-1999-a1-1999)

APPENDIX C – Cotton used for mercury switch test ...

APPENDIX D – Heat, fire and tracking ...

APPENDIX E – Circuit for measuring leakage current ...

APPENDIX F – Heat and fire resistance categories ...

APPENDIX G – Heat and fire resistance test ...

APPENDIX H – Requirements for electronic controls ...

PREFACE

Add the following to the list of notes regarding differing national practices:

Table 7.2, note 9
7.4.3.2.

H27.1.3
H27.1.3a)

Add the following to the list of other IEC publications quoted:

384-14 (1981): Fixed capacitors for radio interference suppression. Selection of methods of test and general requirements.

555 (1982): Disturbances in supply systems caused by household appliances and similar electrical equipment.

1. Scope

Add the following:

- 1.4 This standard applies also to controls incorporating electronic devices, requirements for which are contained in Appendix H.

7. Information

Replace this clause by the following:

7.1 General requirements

The control manufacturer shall provide adequate information to confirm:

- that a suitable control can be selected;
- that the control can be mounted and used in a manner that will enable it to meet the requirements of this standard, and
- that the relevant tests can be performed to ensure compliance with this standard.

7.2 Methods of providing information

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- 7.2.1 Information shall be provided using one or more of the following methods. The information required for controls and the appropriate method for providing this information shall be as indicated in Table 7.2.

It is not intended that Table 7.2 itself necessarily be the actual form used to communicate between manufacturer and test house.

- by Marking (C) – this information shall be provided by marking on the control itself, except that, in the case of an integrated control, such marking may be on an adjacent part of the equipment, provided that it is clear that it refers to the control.

Information provided by Marking (C) may also be included in Documentation (D).

- by Documentation (D) – this information shall be provided for the user or installer of the control, and shall consist of legible instructions. Each control shall be accompanied by such instructions. Instruction sheets and other texts required by this standard shall be written in the official language(s) of the country in which the control is to be sold.

For controls intended to be exclusively delivered to the equipment manufacturer, the instruction sheet may be replaced by a leaflet, letter or drawing, etc. It is not necessary for each control to be accompanied by such a document.

- by Declaration (X) – this information shall be provided for the testing authority for purposes of test and in a manner agreed between testing authority and manufacturer. It may, for example, be provided by a Marking on the control, by a leaflet, letter or drawing or, in the case of a control submitted in, on or with an equipment, by measurement or inspection of the submitted equipment.

Information which is indicated as being required by Declaration (X) should also be provided to the equipment manufacturer, as appropriate.

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- 7.2.2 Information which is indicated as being required by Marking (C) or by Documentation (D) shall also be provided for the testing authority in an agreed manner if so requested by the testing authority.
- 7.2.3 For controls submitted in, on or with an equipment, the requirement for Documentation (D) is replaced by Declaration (X).
- 7.2.4 For an integrated control forming part of a more complex control, the marking relating to the integrated control may be included in the marking of the more complex control.
- 7.2.5 The requirement for Documentation (D) is considered to be met if such information has been provided by Marking (C).
- 7.2.5.1 The requirement for Declaration (X) is considered to be met if such information has been provided by either Documentation (D) or by Marking (C).
- 7.2.6 Except as indicated in Sub-clause 7.4, for integrated controls all information is provided by means of Declaration (X). Unless otherwise indicated in a Part 2, for incorporated controls, the only marking required is the manufacturer's name or trade mark and the unique type reference, if other required marking is provided by Documentation (D). For incorporated controls declared under Item 50, see the explanation of Documentation (D) contained in Sub-clause 7.2.1.
- 7.2.7 For controls that are neither integrated nor incorporated, where lack of space prevents legible marking as specified, the control shall be marked with the manufacturer's name (or trade mark) and the unique type reference only. The other marking required shall be included in Documentation (D).
- 7.2.8 Additional marking or information is allowed, provided that it does not give rise to misunderstanding.

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<https://standards.iteh.ai/catalog/standards/sist/88242195-cf1b-4782-a62b-62a6c916a481/sist-en-60730-1-1999-a1-1999>

TABLE 7.2

Information	Clause or sub-clause	Method
1 Manufacturer's name or trade mark ²⁾		C
2 Unique type reference ^{1) 2)}	2.11.1, 2.13.1	C
3 Rated voltage or rated voltage range in volts (V)	4.3.2, 2.1.2	C
4 Nature of supply, unless the control is for both a.c. and d.c., or unless the rating is the same for a.c. and d.c.	4.3.2, 6.1	C
5 Frequency, if other than for range 50 Hz to 60 Hz inclusive	4.3.2	C
6 Purpose of control	4.3.5, 6.3	D
6a Construction of control and whether the control is electronic	6.15 H2.5.7	D
7 The type of load controlled by each circuit ⁷⁾	14, 17, 6.2	C
15 Degree of protection provided by enclosure ⁸⁾	6.5.1, 6.5.2, 11.5	C

TABLE 7.2 (continued)

Information	Clause or sub-clause	Method
17 Which of the terminals are suitable for the connection of external conductors, and if they are suitable for line or neutral conductors, or both	6.6, 7.4.2, 7.4.3	C
18 Which of the terminals for external conductors are for a wider range of conductor sizes than those indicated in the table of Sub-clause 10.1.4	10.1	D
19 For screwless terminals the method of connection and disconnection ⁹⁾	10	D
20 Details of any special conductors which are intended to be connected to terminals for internal conductors	10.2	D
21 Maximum temperature of terminals for internal conductors, if higher than 85°C	14	X
22 Temperature limits of the switch head, if T_{\min} lower than 0°C, or T_{\max} other than 60°C	6.7, 14.5, 14.7, 17.3	C
23 Temperature limits of mounting surfaces (T_s)	6.12.2, 14.1, 17.3	C
24 Classification of control according to protection against electric shock	6.8	X
25 For Class II controls, the symbol for Class II construction	7.3	C
26 Number of cycles of actuation (M) for each manual action	6.10	X
27 Number of automatic cycles (A) for each automatic action	6.11	X
28 Ageing period (Y) for controls with Type 1.M or 2.M action	6.16	X
29 Type of disconnection or interruption provided by each circuit	6.9	X
30 PTI of materials used for insulation	6.13, 6.15.4 Table 20.1, Note 11	X
31 Method of mounting control ⁵⁾	11.6	D
31a Method of providing earthing of control	7.4.3, 9	D
32 Method of attachment for non-detachable cords ⁶⁾	10.1, 11.7	D
33 Intended transportation condition of control	16.1	X
34 Details of any limitation of operating time	14, 17	D
35 Period of electric stress across insulating parts	6.14	X
36 Limits of activating quantity for any sensing element over which micro-disconnection is secure	11.3.2	X
37 Minimum and/or maximum rates of change of activating quantity, or minimum and/or maximum cycling rates for a sensing control ⁴⁾	4, 15, 17	X