SLOVENSKI STANDARD
SIST EN 60730-1:2016/A2:2022

01-maj-2022

Avtomatske električne krmilne naprave za uporabo v gospodinjstvu in za podobno uporabo - 1. del: Splošne zahteve - Dopolnilo A2

Automatic electrical controls - Part 1: General requirements

Automatische elektrische Regel- und Steuergeräte - Teil 1: Allgemeine Anforderungen

Dispositifs de commande électrique automatiques - Partie 1: Exigences générales

Ta slovenski standard je istoveten z: **EN 60730-1:2016/A2:2022**

ICS:

97.120	Avtomatske krmilne naprave za dom	Automatic controls for household use

SIST EN 60730-1:2016/A2:2022 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60730-1:2016/A2

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English Version

Automatic electrical controls - Part 1: General requirements (IEC 60730-1:2013/A2:2020)

Dispositifs de commande électrique automatiques – Partie 1: Exigences générales (IEC 60730-1:2013/A2:2020)

Automatische elektrische Regel- und Steuergeräte - Teil 1: Allgemeine Anforderungen (IEC 60730-1:2013/A2:2020)

This amendment A2 modifies the European Standard EN 60730-1:2016; it was approved by CENELEC on 2022-02-23. 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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CENELEC

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

European foreword

The text of document 72/1226/FDIS, future IEC 60730-1/A2, prepared by IEC/TC 72 "Automatic electrical controls" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60730-1:2016/A2:2022.

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) 2022-11-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) -

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 Standardization Request given to CENELEC by the European Commission and the European Free Trade Association.

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 60730-1:2013/A2:2020 was approved by CENELEC as a European Standard without any modification.

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.

Publication	Year	Title	EN/HD	Year
IEC 60664-3	2016	Insulation coordination for equipment within low-voltage systems - Part 3: Use of coating, potting or moulding for protection against pollution	EN 60664-3	2017
IEC 61051-1	-	Varistors for use in electronic equipment - Part 1: Generic specification	EN IEC 61051-1	-
IEC 61051-2	-	Varistors for use in electronic equipment - Part 2: Sectional specification for surge suppression varistors	EN IEC 61051-2	-
IEC 61051-2-2	-	Varistors for use in electronic equipment - Part 2: Blank detail specification for zinc oxide surge suppression varistors - Assessment level E	-	-
IEC 63044-3	-	Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 3: Electrical safety requirements	EN IEC 63044-3	-

IEC 60730-1

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

AMENDMENT 2
AMENDEMENT 2

Automatic electrical controls – Part 1: General requirements

Dispositifs de commande électrique automatiques – Partie 1: Exigences générales

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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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
72/1226/FDIS	72/1237/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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

1 Scope and normative references

1.2 Normative references

Replace reference IEC 60664-3:2003 with the following:

IEC 60664-3:2016, *Insulation coordination for equipment within low-voltage systems – Part 3: Use of coating, potting or moulding for protection against pollution*

Add the following references:

IEC 61051-1, *Varistors for use in electronic equipment – Part 1: Generic specification*

IEC 61051-2, *Varistors for use in electronic equipment – Part 2: Sectional specification for surge suppression varistors*

IEC 61051-2-2, *Varistors for use in electronic equipment – Part 2: Blank detail specification for zinc oxide surge suppression varistors. Assessment level E*

IEC 63044-3, *Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) – Part 3: Electrical safety requirements*

2 Terms and definitions

2.1 Definitions relating to ratings, voltages, currents, frequencies, and wattages

Replace Definitions 2.1.4 and 2.1.5 with the following:

2.1.4
extra-low voltage
ELV
voltage not exceeding the maximum values of 50 V AC (RMS), 70,7 V AC (peak) or 120 V DC (ripple-free) between conductors and between conductors and earth which is permitted to be maintained indefinitely under normal and single-fault conditions

Note 1 to entry: Ripple-free is conventionally defined as an RMS ripple voltage of not more than 10 % of the DC component.

Note 2 to entry: The use of **ELV** other than in **SELV system** or **PELV system** is not a protective measure against electric shock, this is in line with IEC 61140:2001.

2.1.5
safety extra-low voltage
SELV
voltage for use in **SELV system** or **PELV system** between simultaneously **accessible part(s)** and between any **accessible part** and earth, not exceeding the limits of 30 V AC (RMS), 42,4 V AC (peak) or 60 V DC (ripple free) under normal and single-fault condition, which is provided by an independent source (such as safety isolating transformers, motor generators, and batteries) or when obtained from higher voltage is obtained by a **safety isolating transformer** or a converter with separate windings providing equivalent insulation

Note 1 to entry: The voltage limits are based on the assumption that the **safety isolating transformer** is supplied at its rated voltage. For the purpose of the output test in 24.1.1, the secondary output voltage limit shall be increased as specified in 17.2.2.

Note 2 to entry: Transformers used in converters that have separate windings and provide equivalent insulation are covered under IEC 61558-2-6 and IEC 61558-2-16.

Note 3 to entry: **SELV** limits are defined regardless of any special condition which may occur in installation. Different requirements may be specified in the relevant electrical installation standards (e.g. IEC 60364 (all parts)) or in the applicable local regulations.

Note 4 to entry: Ripple-free is conventionally defined as an RMS ripple voltage of not more than 10 % of the DC component.

Note 5 to entry: **SELV** limits may be different in other product or system standards. In case a control is declared exclusively for use in applications governed by a different standard, the limits set by the application standard apply (e.g. controls to be used exclusively in household appliances according IEC 60335 set of standards or connected to HBES/BACS systems according to IEC 63044-3 accept different **SELV** voltage limits).

Add the following new definition:

2.3.33
mounting surface temperature
$T_{\mathrm{s\ max}}$
declared maximum temperature to which the mounting surface of the control is intended to be exposed including any likely overshoot once a control has operated

2.13 Miscellaneous definitions

2.13.4
normal use

Add the following Note 3:

Note 3 to entry: **Normal use** may include standby mode, and one or more operating modes.

Add the following new definition:

2.13.12
intentionally weak trace
printed circuit board trace intended to rupture under conditions of abnormal operation to prevent the occurrence of a condition which could impair compliance with this document

Note 1 to entry: See 11.1.4.

7 Information

7.2 Methods of providing information

Table 1 (7.2 of edition 3) – Required information and methods of providing information *(1 of 4)*

Replace line 23, Line 43, line 76, line 86 and line 87 with the following:

	Information	Clause or subclause	Method
23	Maximum temperature of mounting surface ($T_{s\ max}$) if it differs by more than 20 K from T_{max}	6.12.2, 14.1, 17.3	C
43	Reset characteristics for cut-out action	6.4, 11.4.11, 11.4.12	D or E
76	Type of printed circuit board protection	Annex P or Annex Q	X
86	For **SELV** or **PELV** circuits, the **ELV** limits realized	2.1.5, 8.1.1, T.3.2	X
87	Value of accessible voltage of **SELV**/**PELV** circuit, if different from 8.1.1, and the product standard(s) referred to for the application of the **control**, in which the accessible **SELV**/**PELV** level(s) is (are) given	2.1.4, 6.8.4.1, 6.8.4.2, 8.1.1.1	X

8 Protection against electric shock

8.1 General requirements

8.1.1

Replace the second and third paragraphs with the following:

Unless otherwise specified, **accessible parts** connected to **SELV systems** or **PELV systems** where the voltage does not exceed the **SELV** limits of 2.1.5 are not considered to be **hazardous live parts**.

For **accessible parts** connected to a **SELV system** or a **PELV system** where the voltage exceeds the **SELV** limits of 2.1.5 or the voltage limits declared in item 87 of Table 1, the current measured between the simultaneously **accessible parts** and between **accessible parts** and earth shall not exceed the limits in H.8.1.10.1 under fault-free (normal) and single-fault conditions.