SVENSK STANDARD SS-EN 61058-1

Fastställd	Utgåva	Sida	Ingår i
2002-09-11	3	1 (1+168)	SEK Område 23

Svenska Elektriska Kommissionen, SEK

Strömställare för bruksföremål – Del 1: Allmänna fordringar

Switches for appliances –
Part 1: General requirements

Som svensk standard gäller europastandarden EN 61058-1:2002. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61058-1:2002.

Nationellt förord

Europastandarden EN 61058-1:2002

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61058-1, Third edition, 2000 - Switches for appliances - Part 1: General requirements**

jämte

Amendment No. 1, 2001

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare utgiven svensk standard SS-EN 61058-1, utgåva 2, 1994, gäller ej fr o m 2009-03-01.

ICS 29.120.40

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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EUROPEAN STANDARD **EN 61058-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM June 2002

ICS 29.120.40

Supersedes EN 61058-1:1992 + A1:1993

English version

Switches for appliances
Part 1: General requirements
(IEC 61058-1:2000 + A1:2001, modified)

Interrupteurs pour appareils
Partie 1: Règles générales
(CEI 61058-1:2000 + A1:2001, modifiée)

Geräteschalter
Teil 1: Allgemeine Anforderungen
(IEC 61058-1:2000 + A1:2001, modifiziert)

This European Standard was approved by CENELEC on 2002-03-05. 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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, 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

Ref. No. EN 61058-1:2002 E

Foreword

The text of the International Standard IEC 61058-1:2000, prepared by SC 23J, Switches for appliances, of IEC TC 23, Electrical accessories, together with the common modifications prepared by CENELEC Reporting Secretariat SR 23J, was submitted to the formal vote and was approved by CENELEC as EN 61058-1 on 2002-03-05.

The text of document 23J/232/FDIS, future amendment 1 to IEC 61058-1:2000, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC on 2002-03-05 for inclusion into the European Standard.

This European Standard supersedes EN 61058-1:1992 + A1:1993.

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) 2003-03-01

- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2009-03-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annexes A, C, D, E, K, L, M, N, P, Q, R and ZB are normative and annexes B, F, G, H, J, S, T and ZA are informative.
Annexes ZA and ZB have been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 61058-1:2000 + A1:2001 was approved by CENELEC as a European Standard with agreed common modifications as given below.

Annex ZB
(normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60034-1 (mod) A1 A2	1996 1997 1999	Rotating electrical machines Part 1: Rating and performance	EN 60034-1 + corr. February A1 A2	1998 2000 1998 1999
IEC 60038 (mod)	1983	IEC standard voltages [1)]	HD 472 S1 + corr. February	1989 2002
IEC 60050-151	1978	International Electrotechnical Vocabulary (IEV) Chapter 151: Electrical and magnetic devices	-	-
IEC 60050-411	1973	Chapter 411: Rotating machinery	-	-
IEC 60050-441	1984	Chapter 441: Switchgear, controlgear and fuses	-	-
IEC 60050-826 A1 A2	1982 1990 1995	Chapter 826: Electrical installations of buildings	HD 384.2 S2 [2)]	2001
IEC 60060-1	1989	High-voltage test techniques Part 1: General definitions and test requirements	HD 588.1 S1 [3)]	1991
IEC 60068-2-20	1979	Environmental testing Part 2-20: Tests - Test T: Soldering	HD 323.2.20 S3 [4)]	1988
IEC 60068-2-75	1997	Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	1997
IEC 60085	1984	Thermal evaluation and classification of electrical insulation	HD 566 S1	1990

1) The title of HD 472 S1 is: Nominal voltages for low-voltage public electricity supply systems.

2) HD 384.2 S2 is based on IEC 60050-826:1982 + A1:1990 + A2:1995 + A3:1999.

3) HD 588.1 S1 includes corrigendum March 1990 to IEC 60060-1:1989.

4) HD 323.2.20 S3 is based on IEC 60068-2-20:1979 + A2:1987.

Publication	Year	Title	EN/HD	Year
IEC 60112	1979	Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions	HD 214 S2	1980
IEC 60127	Series	Miniature fuses	EN 60127	Series
IEC 60127-2	1989	Part 2: Cartridge fuse-links	EN 60127-2 [5)]	1991
IEC 60228 (mod)	1978	Conductors of insulated cables	HD 383 S2 [6)]	1986
IEC 60228A (mod)	1982	Conductors of insulated cables First supplement: Guide to the dimensional limits of circular conductors	HD 383 S2	1986
IEC 60269-1	1998	Low-voltage fuses Part 1: General requirements	EN 60269-1	1998
IEC 60269-3-1 (mod)	1994	Part 3-1: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications) - Sections I to IV	HD 630.3.1 S3 [7)]	2002
IEC 60335-1 (mod)	1991	Safety of household and similar electrical appliances Part 1: General requirements	EN 60335-1	1994
A1 (mod)	1994		A1	1996
IEC 60335-2 (mod)	Series	Part 2: Particular requirements	EN 60335-2	Series
IEC 60364-4-41 (mod) A1 A2	1992 1996 1999	Electrical installations of buildings Part 4: Protection for safety Chapter 41: Protection against electric shock	HD 384.4.41 S2	1996
IEC 60364-4-442 A1 A2	1993 1995 1999	Chapter 44: Protection against overvoltages Section 442: Protection of low-voltage installations against temporary overvoltages and faults between high-voltage systems and earth	- [8)]	-

[5)] EN 60127-2 includes corrigendum March 1990 to IEC 60127-2.

[6)] HD 383 S2 is based on IEC 60228:1978 + IEC 60228A:1982.

[7)] HD 630.3.1 S3 is based on IEC 60269-3-1:1994 + A1:1995 + A2:2001.

[8)] HD 384.4.442 S1:1997 is not an endorsement of, but is related to IEC 60364-4-442:1993 + A1:1995.

Publication	Year	Title	EN/HD	Year
IEC 60364-4-443 (mod) A1	1995 1998	Section 443: Protection against overvoltages of atmospheric origin or due to switching	HD 384.4.443 S1	2000
IEC 60384-14	1993	Fixed capacitors for use in electronic equipment Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	-	-
IEC 60417-1	1998	Graphical symbols for use on equipment Part 1: Overview and a pplication	EN 60417-1 [9)]	1999
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993
IEC 60617-2	1996	Graphical symbols for diagrams Part 2: Symbol elements, qualifying symbols and other symbols having general application	EN 60617-2	1996
IEC 60664-1 (mod)	1992	Insulation coordination for equipment within low-voltage systems Part 1: Principles, requirements and tests	HD 625.1 S1 + corr. November	1996 1996
IEC 60664-3	1992	Part 3: Use of coatings to achieve insulation coordination of printed board assemblies	HD 625.3 S1	1997
IEC 60669-1 (mod)	1998	Switches for household and similar fixed-electrical installations Part 1: General requirements	EN 60669-1	1999
IEC 60691	1993	Thermal-links - Requirements and application guide	EN 60691 [10)]	1995
IEC 60695-2-1/X	All sheets	Fire hazard testing Part 2-1: Test methods - Glow wire	EN 60695-2-1/X	All sheets
IEC 60707	1999	Flammability of solid non-metallic materials when exposed to flame sources - List of test methods	EN 60707	1999
IEC 60730 (mod)	Series	Automatic electrical controls for household and similar use	EN 60730	Series
IEC 60730-1 (mod)	1999	Part 1: General requirements	EN 60730-1 + A11	2000 2002

[9)] EN 60417-1:1999 is superseded by EN 60417-1:2002, which is based on IEC 60417-1:2000.

[10)] EN 60691 is based on IEC 60691:1993 + A1:1995.

Publication	Year	Title	EN/HD	Year
IEC 60730-2-9	2000	Part 2-9: Particular requirements for temperature sensing controls	EN 60730-2-9	2002
IEC 60738-1	1998	Thermistors - Directly heated positive step-function temperature coefficient Part 1: Generic specification	EN 60738-1	1999
IEC 60760	1989	Flat, quick-connect terminations	-	-
IEC 60893-1	1987	Specification for industrial rigid laminated sheets based on thermosetting resins for electrical purposes Part 1: Definitions, designations and general requirements	EN 60893-1	1994
IEC 60998-2-3	1991	Connecting devices for low-voltage circuits for household and similar purposes Part 2-3: Particular requirements for connecting devices as separate entities with insulation piercing clamping units	EN 60998-2-3	1993
IEC 61000	Series	Electromagnetic compatibility (EMC)	EN 61000	Series
IEC 61000-3-2	1995	Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	EN 61000-3-2 [11)]	1995
A1	1997		A1 [11)]	1998
A2	1998		A2 [11)]	1998
IEC 61000-3-3	1994	Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current ≤ 16 A	EN 61000-3-3 + corr. July	1995 1997
IEC/TR2 61000-3-5	1994	Part 3-5: Limits - Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 16 A	-	-
IEC 61000-4-1	1992	Part 4-1: Testing and measurement techniques - Overview of immunity tests	EN 61000-4-1 [12)]	1994
IEC 61000-4-2	1995	Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	1995
A1	1998		A1	1998

[11)] EN 61000-3-2:1995 and its amendments are superseded by EN 61000-3-2:2000, which is based on IEC 61000-3-2:2000 (mod).

[12)] EN 61000-4-1:1994 is superseded by EN 61000-4-1:2000, which is based on IEC 61000-4-1:2000.

Publication	Year	Title	EN/HD	Year
IEC 61000-4-3 (mod)	1995	Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3 [13)]	1996
A1	1998		A1	1998
IEC 61000-4-4	1995	Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	1995
IEC 61000-4-6	1996	Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	1996
IEC 61000-4-11	1994	Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11	1994
IEC 61032	1997	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	1998
IEC 61058-2-1	- [14)]	Switches for appliances Part 2-1: Particular requirements for core switches	EN 61058-2-1	1994 [15)]
IEC 61058-2-4	- [14)]	Part 2-4: Particular requirements for cord switches		
ISO 1456	1988	Metallic coatings - Electrodeposited coatings of nickel plus chromium and of copper plus nickel plus chromium	-	-
ISO 2081	1986	Metallic coatings - Electroplated coatings of zinc on iron or steel	-	-
ISO 2093	1986	Electroplated coatings of tin - Specification and test methods	-	-
ISO 4046	1978	Paper, board, pulp and related terms - Vocabulary	-	-

[13)] EN 61000-4-3:1996 is superseded by EN 61000-4-3:2002, which is based on IEC 61000-4-3:2002.

[14)] Undated reference.

[15)] Valid edition at date of issue.

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SWITCHES FOR APPLIANCES –

Part 1: General requirements

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 61058-1 has been prepared by subcommittee 23J: Switches for appliances, of IEC technical committee 23: Electrical accessories.

This consolidated version of IEC 61058-1 is based on the third edition (2000) [documents 23J/221/FDIS and 23J/222/RVD] and its amendment 1 (2001) [documents 23J/232/FDIS and 23J/233/RVD].

It bears the edition number 3.1.

A vertical line in the margin shows where the base publication has been modified by amendment 1.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

IEC 61058 consists of the following parts:

Part 1: General requirements;

Part 2-1: Particular requirements for cord switches;

Part 2-4: Particular requirements for independently mounted switches;

Part 2-5: Particular requirements for change-over selectors.

In this part, the following print types are used:

– requirements proper: roman type;
– *test specifications: italic type;*
– notes: smaller roman type.

Annexes A, C, D, E, K, L, M, N, P, Q and R form an integral part of this standard.

Annexes B, F, G, H, J, S and T are for information only.

The following differences exist in some countries:

– 7.1.2.9 The locked rotor power factor is 0,4 to 0,5 to reflect application conditions (USA).
– 15.3 The duration of the application of the test voltage is 1 min to assure the detection of defects in the insulation (USA).
– 17.2.4.7 The minimum number of operating cycles is 6 000 (USA).
– 17.2.5 The temperature rise at the terminals shall not exceed 30 °C (USA).
– Table 16 The make current for the inductive circuit is I-I to reflect actual application conditions (USA).
– Table 16 The horsepower ratings are used when controlling a motor rated in horsepower (USA).
– 25 EMC is not considered to be a safety-related matter (USA).

The committee has decided that the contents of the base publication and its amendment will remain unchanged until 2006. At this date, the publication will be

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

SWITCHES FOR APPLIANCES –

Part 1: General requirements

1 Scope

1.1 This International Standard applies to switches (mechanical or electronic) for appliances actuated by hand, by foot or by other human activity, to operate or control electrical appliances and other equipment for household or similar purposes with a rated voltage not exceeding 440 V and a rated current not exceeding 63 A.

These switches are intended to be operated by a person, via an actuating member or by actuating a sensing unit. The actuating member or sensing unit can be integral with or arranged separately, either physically or electrically, from the switch and may involve transmission of a signal, for example electrical, optical, acoustic or thermal, between the actuating member or sensing unit and the switch.

Switches which incorporate additional control functions governed by the switch function are within the scope of this standard.

This standard also covers the indirect actuation of the switch when the operation of the actuating member or sensing unit is provided by a remote control or a part of an appliance or equipment such as a door.

NOTE 1 Electronic switches may be combined with mechanical switches giving full disconnection or micro-disconnection.

NOTE 2 Electronic switches without a mechanical switch in the supply circuit provide only electronic disconnection. Therefore, the circuit on the load side is always considered to be live.

NOTE 3 For switches used in tropical climates, additional requirements may be necessary.

NOTE 4 Attention is drawn to the fact that the standards for appliances may contain additional or alternative requirements for switches.

NOTE 5 Throughout this standard, the word "appliance" means "appliance or equipment".

NOTE 6 This part of IEC 61058 is applicable when testing incorporated switches. When other types of switches for appliances are tested, this part is applicable together with the relevant IEC 61058-2.

This part may, however, be applied for other types of switches which are not mentioned in IEC 61058-2, provided that the electrical safety is not disregarded.

1.2 This standard applies to switches intended to be incorporated in, on or with an appliance.

1.3 This standard also applies to switches incorporating electronic devices.

1.4 This standard also applies to switches for appliances such as

– switches intended to be connected to a flexible cable (cord switches);

  NOTE In this document, the word "cable" means "cable or cord".

– switches integrated in an appliance (integrated switches);

– switches intended to be mounted apart from the appliance (independently mounted switches) other than those within the scope of IEC 60669-1;

– change-over selectors for which, however, particular requirements are given in IEC 61058-2.

1.5 This standard does not contain requirements for isolating switches.

NOTE Requirements for isolating switches are under consideration.

1.6 This standard does not apply to devices which control appliances and equipment not actuated intentionally by a person. These are covered by IEC 60730.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 60034-1:1996, *Rotating electrical machines – Part 1: Rating and performance* [1)]
Amendment 1 (1997)
Amendment 2 (1999)

IEC 60038:1983, *IEC standard voltages*

IEC 60050(151):1978, *International Electrotechnical Vocabulary (IEV) – Chapter 151: Electrical and magnetic devices*

IEC 60050(411):1973, *International Electrotechnical Vocabulary (IEV) – Chapter 411: Rotating machinery*

IEC 60050(441):1984, *International Electrotechnical Vocabulary (IEV) – Chapter 441: Switchgear, controlgear and fuses*

IEC 60050(826):1982, *International Electrotechnical Vocabulary (IEV) – Chapter 826: Electrical installations of buildings*
Amendment 1 (1990)
Amendment 2 (1995)

IEC 60060-1:1989: *High-voltage techniques – Part 1: General definitions and test requirements*

IEC 60068-2-20:1979, *Environmental testing – Part 2-20: Tests – Test T: Soldering*

IEC 60068-2-75:1997, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60085:1984, *Thermal evaluation and classification of electrical insulation*

IEC 60112:1979, *Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions*

IEC 60127 (all parts), *Miniature fuses*

IEC 60127-2:1989, *Miniature fuses – Part 2: Cartridge fuse-links*

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1) There is a consolidated edition 10.2 (1999) that includes IEC 60034-1 and its amendments 1 (1997) and 2 (1999).

IEC 60228:1978, *Conductors of insulated cables*

IEC 60228A:1982, *Conductors of insulated cables – First supplement: Guide to the dimensional limits of circular conductors*

IEC 60269-1:1998, *Low-voltage fuses – Part 1: General requirements*

IEC 60269-3-1:1994, *Low-voltage fuses – Part 3-1: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications) – Sections I to IV*

IEC 60335-1:1991, *Safety of household and similar electrical appliances – Part 1: General requirements*
Amendment 1 (1994)

IEC 60335 (all parts 2), *Safety for household and similar electrical appliances*

IEC 60364-4-41:1992, *Electrical installations of buildings – Part 4: Protection for safety – Chapter 41: Protection against electric shock* [2)]
Amendment 1 (1996)
Amendment 2 (1999)

IEC 60364-4-442:1993, *Electrical installations of buildings – Part 4: Protection for safety – Chapter 44: Protection against overvoltage – Section 442: Protection of low-voltage installations against faults between high-voltage systems and earth* [3)]
Amendment 1 (1995)
Amendment 2 (1999)

IEC 60364-4-443:1995, *Electrical installations of buildings – Part 4: Protection for safety – Chapter 44: Protection against overvoltages – Section 443: Protection against overvoltages of atmospheric origin or due to switching* [4)]
Amendment 1 (1998)

IEC 60384-14:1993, *Fixed capacitors for use in electronic equipment – Part 14: Sectional specification: Fixed capacitors for electromagnetic suppression and connection to the supply mains*

IEC 60417-1:1998, *Graphical symbols for use on equipment – Part 1: Overview and application*

IEC 60529:1989, *Degree of protection provided by enclosures (IP code)*

IEC 60617-2:1996, *Graphical symbols for diagrams – Part 2: Symbol elements, qualifying symbols and other symbols having general application*

IEC 60664-1:1992, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

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2) There is a consolidated edition 3.2 (1999) that includes IEC 60364-4-41 and its amendments 1 (1996) and 2 (1999).

3) There is a consolidated edition 1.2 (1999) that includes IEC 60364-4-442 and its amendments 1 (1995) and 2 (1999).

4) There is a consolidated edition 3.2 (1999) that includes IEC 60364-4-443 and its amendment 1 (1998).

IEC 60664-3:1992, *Insulation coordination for equipment within low-voltage systems – Part 3: Use of coatings to achieve insulation coordination of printed board assemblies*

IEC 60669-1:1998, *Switches for household and similar fixed electrical installations – Part 1: General requirements*

IEC 60691:1993, *Thermal-links – Requirements and application guide*

IEC 60695-2-1 (all sheets), *Fire hazard testing – Part 2-1: Test methods*

IEC 60707:1999, *Flammability of solid non-metallic materials when exposed to flame sources – List of methods*

IEC 60730 (all parts), *Automatic electrical controls for household and similar use*

IEC 60730-1:1999, *Automatic electrical controls for household and similar use – Part 1: General requirements*

IEC 60730-2-9:2000, *Automatic electrical controls for household and similar use – Part 2-9: Particular requirements for temperature sensing controls*

IEC 60738-1:1998, *Thermistors directly heated positive step-function temperature efficient thermistors – Part 1: Generic specification*

IEC 60760:1989, *Flat, quick-connect terminations*

IEC 60893-1:1987, *Specification for industrial rigid laminated sheets based on thermosetting resins for electrical purposes – Part 1: Definitions, designations and general requirements*

IEC 60998-2-3:1991, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-3: Particular requirements for connecting devices as separate entities with insulation piercing clamping units*

IEC 61000 (all parts), *Electromagnetic compatibility (EMC)*

IEC 61000-3-2:1995, *Electromagnetic compatibility (EMC) – Part 3: Limits – Section 2: Limits for harmonic current emissions (equipment input current ≤16 A per phase)* [5)]
Amendment 1 (1997)
Amendment 2 (1998)

IEC 61000-3-3:1994, *Electromagnetic compatibility (EMC) – Part 3: Limits – Section 3: Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current ≤16 A*

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5) There is a consolidated edition 1.2 (1998) that includes IEC 61000-3-2 and its amendments 1 (1997) and 2 (1998).

IEC/TR2 61000-3-5:1994, *Electromagnetic compatibility (EMC) – Part 3: Limits – Section 5: Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 16 A*

IEC 61000-4-1:1992, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 1: Overview of immunity tests. Basic EMC publication*

IEC 61000-4-2:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 2: Electrostatic discharge immunity test. Basic EMC publication* [6)]
Amendment 1 (1998)

IEC 61000-4-3:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 3: Radiated, radio-frequency, electromagnetic field immunity test* [7)]
Amendment 1 (1998)

IEC 61000-4-4:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 4: Electrical fast transient/burst immunity test. Basic EMC publication*

IEC 61000-4-6:1996, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 6: Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000 4-11:1994, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 11: Voltage dips, short interruptions and voltage variations immunity tests*

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

IEC 61058-2-1, *Switches for appliances – Part 2-1: Particular requirements for cord switches*

IEC 61058-2-4, *Switches for appliances – Part 2-4: Particular requirements for independently mounted switches*

ISO 1456:1988, *Metallic coatings – Electrodeposited coatings of nickel plus chromium and of copper plus nickel plus chromium*

ISO 2081:1986, *Metallic coatings – Electroplated coatings of zinc of iron or steel*

ISO 2093:1986, *Electroplated coatings of tin – Specification and test methods*

ISO 4046:1978, *Paper, board, pulp and related terms – Vocabulary*

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6) There is a consolidated edition 1.1 (1999) that includes IEC 61000-4-2 and its amendment 1 (1998).

7) There is a consolidated edition 1.1 (1998) that includes IEC 61000-4-3 and its amendment 1 (1998).