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colour inside

Switches for appliances –
Part 1: General requirements

INTERNATIONAL
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COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SWITCHES FOR APPLIANCES –

Part 1: General requirements

FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

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

This fourth edition cancels and replaces the third edition published in 2000, Amendment 1:2001 and Amendment 2:2007. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) requirements for mechanical switches are now given in IEC 61058-1-1;

b) requirements for electronic switches are now given in IEC 61058-1-2.

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

FDIS	Report on voting
23J/401/FDIS	23J/405/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 2.

A list of all parts in the IEC 61058 series, published under the general title *Switches for appliances*, can be found on the IEC website.

In this part, the following print types are used:

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

The committee has decided that the contents of this 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- withdrawn,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 publication using a colour printer.

SWITCHES FOR APPLIANCES –

Part 1: General requirements

1 Scope

~~1.1~~ This part of IEC 61058 applies to switches ~~(mechanical or electronic)~~ for appliances ~~actuated by hand, by foot or by other human activity~~. The switches are intended to ~~operate or~~ control electrical appliances and other equipment for household or similar purposes with a rated voltage not exceeding ~~440~~ 480 V and a rated current not exceeding 63 A.

Switches for appliances are intended to be operated by

– a person via an actuating member ~~or by~~,
– indirect actuation,
– an actuating 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.~~

Transmission of a signal between the actuating member or sensing unit and the switch may be connected by optical, acoustic, thermal, electrical or other relevant connection and may include remote controlled units.

This part of IEC 61058 applies to switches for appliances provided with additional control functions governed by the switch provided with electronic circuits and devices that are necessary for the intended and/or correct operation of the switch.

This part of IEC 61058 applies to circuitry when evaluated with a switch and necessary for the switching function.

This part of IEC 61058 applies in general to switches for appliances in conjunction with the following parts:

– *Part 1-1: Requirements for mechanical switches*, and/or

– *Part 1-2: Requirements for electronic switches*.

This part of IEC 61058 does not apply to devices covered by:

– IEC 60669 (all parts), *Switches for household and similar fixed-electrical installations*, and

– IEC 60730 (all parts), *Automatic electrical controls*.

This part of IEC 61058 does not contain requirements for safety isolating switches (IEC 60050-811:1991, 811-29-17).

NOTE 1 For switches used in tropical climates, additional requirements may be necessary.

NOTE 2 Attention is drawn to the fact that the end product standards for appliances may contain additional or alternative requirements for switches.

NOTE 3 Throughout this part of IEC 61058, the word "appliance" means "appliance or equipment".

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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)~~

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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 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 60065:2014, *Audio, video and similar electronic apparatus – Safety 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~~ 2003, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials~~ under moist conditions~~*
Amendment 1:2009

IEC 60127 (all parts), *Miniature fuses*

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

~~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, *Low-voltage fuses – Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household or similar applications) – Examples of standardized systems of fuses A to F*

~~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 interference suppression and connection to the supply mains*

IEC 60417, *Graphical symbols for use on equipment* (available at: http://www.graphical-symbols.info/equipment)

~~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)*
Amendment 1:1999
Amendment 2:2013

IEC 60617, *Graphical symbols for diagrams* (available at: http://std.iec.ch/iec60617)

~~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*~~

IEC 60664-3:~~1992~~ 2003, *Insulation coordination for equipment within low-voltage systems – Part 3: Use of coatings ~~to achieve insulation coordination of printed board assemblies~~, potting or molding for protection against pollution*
Amendment 1:2010

~~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*~~

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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 60695-2-11, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products*

IEC 60695-10-2, *Fire hazard testing – Part 10-2: Abnormal heat – Ball pressure test method*

IEC 60695-11-10, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*

IEC 60695-11-20, *Fire hazard testing – Part 11-20: Test flames – 500 W flame test method*

~~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~~ 2013, *Automatic electrical controls ~~for household and similar use~~ – Part 1: General requirements*

IEC 60730-2-9:~~2000~~ 2015, *Automatic electrical controls ~~for household and similar use~~ – Part 2-9: Particular requirements for temperature sensing control~~s~~*

IEC 60738-1~~:1998~~, *Thermistors – Directly heated positive ~~step-function~~ temperature ~~efficient thermistors~~ coefficient – 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 3.2: Limits – 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 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage ~~power~~ supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection*

IEC~~/TR2~~ TS 61000-3-5~~:1994~~, *Electromagnetic compatibility (EMC) – Part 3-5: Limits – Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than ~~16~~ 75 A*

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

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

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

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

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

IEC 61000-4-5, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*

~~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 61000-4-8, *Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test*

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

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

IEC 61058-1-1, *Switches for appliances – Part 1-1: Requirements for mechanical switches*

IEC 61058-1-2, *Switches for appliances – Part 1-2: Requirements for electronic switches.*

IEC 61210:2010, *Connecting devices – Flat quick-connect terminations for electrical copper conductors – Safety requirements*

CISPR 14-1, *Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission*

CISPR 15:2013, *Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment*

~~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*~~

~~[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).~~

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Switches for appliances – Part 1: General requirements

Interrupteurs pour appareils – Partie 1: Exigences générales

IEC 61058-1:2016-07(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SWITCHES FOR APPLIANCES –

Part 1: General requirements

FOREWORD

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

This fourth edition cancels and replaces the third edition published in 2000, Amendment 1:2001 and Amendment 2:2007. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) requirements for mechanical switches are now given in IEC 61058-1-1;
b) requirements for electronic switches are now given in IEC 61058-1-2.

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

FDIS	Report on voting
23J/401/FDIS	23J/405/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 2.

A list of all parts in the IEC 61058 series, published under the general title *Switches for appliances*, can be found on the IEC website.

In this part, the following print types are used:

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

The committee has decided that the contents of this 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.

SWITCHES FOR APPLIANCES –

Part 1: General requirements

1 Scope

This part of IEC 61058 applies to switches for appliances. The switches are intended to control electrical appliances and other equipment for household or similar purposes with a rated voltage not exceeding 480 V and a rated current not exceeding 63 A.

Switches for appliances are intended to be operated by

– a person via an actuating member,

– indirect actuation,

– an actuating sensing unit.

Transmission of a signal between the actuating member or sensing unit and the switch may be connected by optical, acoustic, thermal, electrical or other relevant connection and may include remote controlled units.

This part of IEC 61058 applies to switches for appliances provided with additional control functions governed by the switch provided with electronic circuits and devices that are necessary for the intended and/or correct operation of the switch.

This part of IEC 61058 applies to circuitry when evaluated with a switch and necessary for the switching function.

This part of IEC 61058 applies in general to switches for appliances in conjunction with the following parts:

– *Part 1-1: Requirements for mechanical switches*, and/or

– *Part 1-2: Requirements for electronic switches*.

This part of IEC 61058 does not apply to devices covered by:

– IEC 60669 (all parts), *Switches for household and similar fixed-electrical installations*, and

– IEC 60730 (all parts), *Automatic electrical controls*.

This part of IEC 61058 does not contain requirements for safety isolating switches (IEC 60050-811:1991, 811-29-17).

NOTE 1 For switches used in tropical climates, additional requirements may be necessary.

NOTE 2 Attention is drawn to the fact that the end product standards for appliances may contain additional or alternative requirements for switches.

NOTE 3 Throughout this part of IEC 61058, the word "appliance" means "appliance or equipment".

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60038, *IEC standard voltages*

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

IEC 60065:2014, *Audio, video and similar electronic apparatus – Safety requirements*

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

IEC 60112:2003, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*
Amendment 1:2009

IEC 60127 (all parts), *Miniature fuses*

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

IEC 60269-3, *Low-voltage fuses – Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household or similar applications) – Examples of standardized systems of fuses A to F*

IEC 60384-14, *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, *Graphical symbols for use on equipment* (available at: http://www.graphical-symbols.info/equipment)

IEC 60529:1989, *Degree of protection provided by enclosures (IP code)*
Amendment 1:1999
Amendment 2:2013

IEC 60617, *Graphical symbols for diagrams* (available at: http://std.iec.ch/iec60617)

IEC 60664-3:2003, *Insulation coordination for equipment within low-voltage systems – Part 3: Use of coating, potting or molding for protection against pollution*
Amendment 1:2010

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

IEC 60695-2-11, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products*

IEC 60695-10-2, *Fire hazard testing – Part 10-2: Abnormal heat – Ball pressure test method*

IEC 60695-11-10, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*

IEC 60695-11-20, *Fire hazard testing – Part 11-20: Test flames – 500 W flame test method*

IEC 60730 (all parts), *Automatic electrical controls*

IEC 60730-1:2013, *Automatic electrical controls – Part 1: General requirements*

IEC 60730-2-9:2015, *Automatic electrical controls – Part 2-9: Particular requirements for temperature sensing control*

IEC 60738-1, *Thermistors – Directly heated positive temperature coefficient – Part 1: Generic specification*

IEC 61000-3-2, *Electromagnetic compatibility (EMC) – Part 3.2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*

IEC 61000-3-3, *Electromagnetic compatibility (EMC) – Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection*

IEC TS 61000-3-5*, Electromagnetic compatibility (EMC) – Part 3-5: Limits – Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 75 A*

IEC 61000-4-2*, Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

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

IEC 61000-4-5, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*

IEC 61000-4-8, *Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test*

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

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

IEC 61058-1-1, *Switches for appliances – Part 1-1: Requirements for mechanical switches*

IEC 61058-1-2, *Switches for appliances – Part 1-2: Requirements for electronic switches.*

IEC 61210:2010, *Connecting devices – Flat quick-connect terminations for electrical copper conductors – Safety requirements*

CISPR 14-1, *Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission*

CISPR 15:2013, *Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment*

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IEC 60034-1:2010, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60050-151:2001, *International Electrotechnical Vocabulary – Part 151: Electrical and magnetic devices*

IEC 60050-411:1996, *International Electrotechnical Vocabulary – Chapter 411: Rotating machinery*

IEC 60050-441:1984, *International Electrotechnical Vocabulary – Chapter 441: Switchgear, controlgear and fuses*
Amendment 1:2000

IEC 60050-826:2004, *International Electrotechnical Vocabulary – Part 826: Electrical installations*

IEC 60068-2-20:2008, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads*

IEC 60085:2007, *Electrical insulation – Thermal evaluation and designation*

IEC 60228:2004, *Conductors of insulated cables*

IEC 60335-1, *Household and similar electrical appliances – Safety – Part 1: General requirements*

IEC 60335-2 (all parts), *Household and similar electrical appliances – Safety*

IEC 60664-1:2007, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60893-1:2004, *Insulating materials – Industrial rigid laminated sheets based on thermosetting resins for electrical purposes – Part 1: Definitions, designations and general requirements*

IEC 60998-2-3:2002, *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 61140, *Protection against electric shock – Common aspects for installation and equipment*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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INTERRUPTEURS POUR APPAREILS –

Partie 1: Exigences générales

AVANT-PROPOS

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La Norme internationale IEC 61058-1 a été établie par le sous-comité 23J: Interrupteurs pour appareils, du comité d'études 23 de l'IEC: Petit appareillage.

Cette quatrième édition annule et remplace la troisième édition parue en 2000, l'Amendement 1:2001 et l'Amendement 2:2007. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) les exigences relatives aux constructions d'interrupteurs mécaniques sont maintenant incluses dans l'IEC 61058-1-1;
b) les exigences relatives aux constructions d'interrupteurs électroniques sont maintenant incluses dans l'IEC 61058-1-2.

Le texte de cette norme est issu des documents suivants:

FDIS	Rapport de vote
23J/401/FDIS	23J/405/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette norme.

Cette publication a été rédigée selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 61058, publiées sous le titre général *Interrupteurs pour appareils*, peut être consultée sur le site web de l'IEC.

Dans la présente partie, les caractères d'imprimerie suivants sont employés:

- exigences proprement dites: caractères romains;
- modalités d'essai: *caractères italiques*;
- notes: petits caractères romains.

Le comité a décidé que le contenu de cette publication ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous "http://webstore.iec.ch" dans les données relatives à la publication recherchée. A cette date, la publication sera

- reconduite,
- supprimée,
- remplacée par une édition révisée, ou
- amendée.

INTERRUPTEURS POUR APPAREILS –

Partie 1: Exigences générales

1 Domaine d'application

La présente partie de l'IEC 61058 s'applique d'une manière générale aux interrupteurs pour appareils. Les interrupteurs permettent de commander des appareils électriques et autres matériels pour usage domestique et analogue dont la tension assignée ne dépasse pas 480 V et le courant assigné ne dépasse pas 63 A.

Les interrupteurs pour appareils sont prévus pour être manœuvrés par:

– une personne par l'intermédiaire d'un organe de manœuvre,

– une manœuvre indirecte,

– une unité sensible de manœuvre.

La transmission d'un signal entre l'organe de manœuvre ou l'unité sensible et l'interrupteur peut être associée à une liaison optique, acoustique, thermique, électrique ou toute autre liaison appropriée et peut comporter des unités télécommandées.

La présente partie de l'IEC 61058 s'applique aux interrupteurs pour appareils comportant des fonctions de commande additionnelles gérées par l'interrupteur, qui comporte lui-même des circuits électroniques ainsi que des dispositifs nécessaires au fonctionnement prévu et/ou correct de l'interrupteur.

La présente partie de l'IEC 61058 s'applique aux circuits lorsqu'ils sont évalués avec l'interrupteur, car nécessaires à sa fonction de coupure.

La présente partie de l'IEC 61058 s'applique d'une manière générale aux interrupteurs pour appareils conjointement avec les parties suivantes:

– *Partie 1-1: Exigences relatives aux interrupteurs mécaniques*, et/ou

– *Partie 1-2: Exigences relatives aux interrupteurs électroniques*.

La présente partie de l'IEC 61058 ne s'applique pas aux produits couverts par les normes suivantes:

– l'IEC 60669 (toutes les parties), *Interrupteurs pour installations électriques fixes domestiques et analogues*, et

– l'IEC 60730 (toutes les parties), *Dispositifs de commande électrique automatiques*;

La présente partie de l'IEC 61058 ne comporte aucune exigence relative aux interrupteurs sectionneurs (IEC 60050-811:1991, 811-29-17).

NOTE 1 Pour les interrupteurs utilisés dans des climats tropicaux, des exigences supplémentaires peuvent être nécessaires.

NOTE 2 L'attention est attirée sur le fait que les normes des produits finaux pour appareils peuvent contenir des exigences supplémentaires ou différentes pour les interrupteurs.

NOTE 3 Dans la présente partie de l'IEC 61058, le terme "appareil" signifie "appareil ou équipement".

2 Références normatives

Les documents suivants sont cités en référence de manière normative, en intégralité ou en partie, dans le présent document et sont indispensables pour son application. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60038, *Tensions normales de l'IEC*

IEC 60060-1, *Technique des essais à haute tension – Partie 1: Définitions et exigences générales*

IEC 60065:2014, *Appareils audio, vidéo et appareils électroniques analogues – Exigences de sécurité*

IEC 60068-2-75, *Essais d'environnement – Partie 2-75: Essais – Essai Eh: Essais au marteau*

IEC 60112:2003, *Méthode de détermination des indices de résistance et de tenue au cheminement des matériaux isolants solides*
Amendement 1:2009

IEC 60127, *Coupe-circuit miniatures*

IEC 60269-3, *Fusibles basse tension – Partie 3: Exigences supplémentaires pour les fusibles destinés à être utilisés par des personnes non qualifiées (fusibles pour usages essentiellement domestiques et analogues) – Exemples de systèmes de fusibles normalisés A à F*

IEC 60384-14, *Condensateurs fixes utilisés dans les équipements électroniques – Partie 14: Spécification intermédiaire: Condensateurs fixes d'antiparasitage et raccordement à l'alimentation*

IEC 60417, *Symboles graphiques utilisables sur le matériel* (disponible sous: http://www.graphical-symbols.info/equipment)

IEC 60529:1989, *Degrés de protection procurés par les enveloppes (Code IP)*
Amendement 1:1999
Amendement 2:2013

IEC 60617, *Symboles graphiques pour schémas* (disponible sous: http://std.iec.ch/iec60617)

IEC 60664-3:2003, *Coordination de l'isolement des matériels dans les systèmes (réseaux) à basse tension – Partie 3: Utilisation de revêtement, d'empotage ou de moulage pour la protection contre la pollution*
Amendement 1:2010

IEC 60691, *Protecteurs thermiques – Exigences et guide d'application*

IEC 60695-2-11, *Essais relatifs aux risques du feu – Partie 2-11: Essais au fil incandescent/chauffant – Méthode d'essai d'inflammabilité pour produits finis*

IEC 60695-10-2, *Essais relatifs aux risques du feu – Partie 10-2: Chaleurs anormales – Essai à la bille*

IEC 60695-11-10, *Essais relatifs aux risques du feu – Partie 11-10: Flammes d'essai – Méthodes d'essai horizontal et vertical à la flamme de 50 W*

IEC 60695-11-20, *Essais relatifs aux risques du feu – Partie 11-20: Flammes d'essai – Méthode d'essai à la flamme de 500 W*

IEC 60730 (toutes les parties), *Dispositifs de commande électrique automatiques*

IEC 60730-1:2013, *Dispositifs de commande électrique automatiques – Partie 1: Exigences générales*

IEC 60730-2-9, *Automatic electrical controls – Part 2-9: Particular requirements for temperature sensing control* (disponible en anglais uniquement)

IEC 60738-1, *Thermistances – Coefficient de température positif à chauffage direct – Partie 1: Spécification générique*

IEC 61000-3-2, *Compatibilité électromagnétique (CEM) – Partie 3-2: Limites – Limites pour les émissions de courant harmonique (courant appelé par les appareils ≤ à 16 A par phase)*

IEC 61000-3-3, *Compatibilité électromagnétique (CEM) – Partie 3-3: Limites – Limitation des variations de tension, des fluctuations de tension et du papillotement dans les réseaux publics d'alimentation basse tension pour l'équipement ayant un courant assigné ≤ à 16 A par phase et non soumis à un raccordement conditionnel*

IEC TS 61000-3-5, *Compatibilité électromagnétique (CEM) – Partie 3-5: Limites – Limitation des fluctuations de tension et du flicker dans les réseaux basse tension pour les équipements ayant un courant assigné supérieur à 75 A*

IEC 61000-4-2, *Compatibilité électromagnétique (CEM) – Partie 4-2: Techniques d'essai et de mesure – Essai d'immunité aux décharges électrostatiques*

IEC 61000-4-3, *Compatibilité électromagnétique (CEM) – Partie 4-3: Techniques d'essai et de mesure – Essai d'immunité aux champs électromagnétiques rayonnés aux fréquences radioélectriques*

IEC 61000-4-4, *Compatibilité électromagnétique (CEM) – Partie 4-4: Techniques d'essai et de mesure – Essais d'immunité aux transitoires électriques rapides en salves*

IEC 61000-4-5, *Compatibilité électromagnétique (CEM) – Partie 4-5: Techniques d'essai et de mesure – Essai d'immunité aux ondes de choc*

IEC 61000-4-8, *Compatibilité électromagnétique (CEM) – Partie 4-8: Techniques d'essai et de mesure – Essai d'immunité au champ magnétique à la fréquence du réseau*

IEC 61000-4-11, *Compatibilité électromagnétique (CEM) – Partie 4-11: Techniques d'essai et de mesure – Essais d'immunité aux creux de tension, coupures brèves et variations de tension*

IEC 61032:1997, *Protection des personnes et des matériels par les enveloppes – Calibres d'essais pour la vérification*

IEC 61058-1-1, *Interrupteurs pour appareils – Partie 1-1: Exigences relatives aux interrupteurs mécaniques*

IEC 61058-1-2, *Interrupteurs pour appareils – Partie 1-2: Exigences relatives aux interrupteurs électroniques*

IEC 61210:2010, *Dispositifs de connexion – Bornes plates à connexion rapide pour conducteurs électriques en cuivre – Exigences de sécurité*

CISPR 14-1, *Compatibilité électromagnétique – Exigences pour les appareils électrodomestiques, outillages électriques et appareils analogues – Partie 1: Emission*

CISPR 15:2013, *Limites et méthodes de mesure des perturbations radioélectriques produites par les appareils électriques d'éclairage et les appareils analogues*