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INTERNATIONAL STANDARD

colour inside

Switches for appliances –
Part 1: General requirements

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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CONTENTS

FOREWORD 7
1 Scope 9
2 Normative references 10
3 Terms and definitions 15
3.1 General terms and definitions 15
3.2 Terms and definitions relating to voltage~~s,~~ and current~~s and wattage~~ 19
3.3 Terms and definitions relating to the different types of switches 21
3.4 Terms and definitions relating to the operation of the switch 22
3.6 Terms and definitions relating to terminals and terminations 24
3.7 Terms and definitions relating to insulation 26
3.8 Terms and definitions relating to pollution 27
3.9 Terms and definitions relating to manufacturers' tests 28
4 General requirements 28
5 General ~~notes~~ information on tests 28
5.1 Testing shall be performed according to the general guideline information provided in Clause 5 28
5.2 Electrical information 32
5.3 Test loads on multiway switches 33
5.4 Test specimens 33
6 Rating 33
7 Classification 33
~~7.1 Classification of switches ..... 33~~
7.1 According to nature of supply 33
7.2 According to type of load to be controlled by each circuit of the switch 34
7.3 According to ambient temperature 34
7.4 According to number of operating cycles 35
7.5 Degree of protection against solid foreign objects ~~(according to IEC 60529)~~ 35
7.6 Degree of protection against ingress of water ~~(according to IEC 60529)~~ 36
7.7 According to degree of protection against electric shock for an incorporated switch for use in 36
7.8 According to degree of pollution inside the switch 36
7.9 According to degree of pollution outside the switch 37
7.10 According to marking 37
7.11 According to resistance to ignitability by the glow wire temperature 37
7.12 According to the rated impulse withstand voltage 38
7.13 According to the rated overvoltage category 38
7.14 According to type of disconnection 38
7.15 According to the type of coating for rigid printed board assemblies 38
7.16 According to type and/or connection of switches 38
7.17 According to configuration of switching device 40
7.18 According to duty type ~~for electronic switches~~ 41
7.19 According to linkage between contact and actuator speed 41
7.20 ~~Classification~~ According to the type of terminals 41
7.21 According to the type of built in protection ~~for electronic switches~~ 43
7.22 According to the ~~condition of cooling for electronic switches~~ type of forced cooling 43
7.23 According to the capacitor provided with the switch 43

This is a preview - click here to buy the full publication

8 Marking and documentation 51
8.1 Switch information 51
8.3 Load rating 57
8.4 Temperature rating 62
8.5 Operating cycles 62
8.6 Switches intended for use in Class II equipment or appliances 63
8.7 Required marking 63
8.8 Legibility and durability of marking 63
8.9 Switches with their own enclosure 63
9 Protection against electric shock 64
10 Provision for earthing 66
11 Terminals and terminations 67
~~11.1 Terminals for copper conductors ....~~
11.1 Common requirements to terminals 76
11.2 Fixing of terminals 78
11.3 Location and shielding of terminals 78
11.4 Terminals for interconnection of more than one conductors 78
11.5 Thermal stress 79
11.6 Test sequences 79
11.7 Conductor escape test (TT1) 79
11.8 Terminal displacement test (TT2) 80
11.9 Strand escape test (TT3) 81
11.10 Multiple conductors (TT4) 82
12 Construction 82
12.1 Constructional requirements relating to protection against electric shock 82
12.2 Constructional requirements relating to safety during mounting and normal operation of the switch 83
12.3 Constructional requirements relating to the mounting of switches and to the attachment of cords 84
13 Mechanism 84
14 Protection against ingress of solid foreign objects, ingress of ~~dust,~~ water and humid conditions 85
14.1 Protection against ingress of solid foreign objects 85
~~14.2 Protection against ingress of dust ....~~
14.2 Protection against ingress of water 87
14.3 Protection against humid conditions 87
15 Insulation resistance and dielectric strength 88
15.1 General requirements 88
15.2 Measurement of insulation resistance 89
15.3 Insulation test voltage 89
16 Heating 90
16.1 General requirements 90
16.2 Contacts and terminals 90
16.3 Other parts 92
16.4 Heating test 96
17 Endurance 97
~~17.1 General requirements ....~~
~~17.2 Electrical endurance tests ....~~

This is a preview - click here to buy the full publication

18 Mechanical strength 108
18.1 General requirements 108
18.2 Impact 108
18.3 Pull 110
18.4 Push 111
19 Screws, current-carrying parts and connections 111
19.1 General requirements for electrical connections 111
19.2 Screwed connections 111
19.3 Current-carrying parts 114
20 Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies 115
20.1 General requirements 115
20.2 Clearances 116
20.3 Clearances for disconnection 118
20.4 Creepage distances 118
20.5 Solid insulation 121
20.6 Coatings of rigid printed board assemblies 121
~~21 Resistance to heat and fire ..... ~~
21 Fire hazard 123
21.1 Resistance to heat 123
21.2 Resistance to abnormal heat 124
22 Resistance to rusting 125
23 Abnormal operation and fault conditions for ~~electronic~~ switches 125
24 Components for switches 130
24.1 General requirements 130
24.2 Protective devices 130
24.3 Capacitors 132
24.4 Resistors 133
25 EMC requirements 134
25.1 General 134
25.2 Immunity 134
25.3 Emission 137
Annex A (normative) Measurement of clearances and creepage distances 153
Annex B (informative) Diagram for the dimensioning of clearances and creepage distances 159
~~Annex C (normative) Glow-wire test ..... ~~
Annex C (normative) Proof tracking test 161
Annex D (informative) Switch application guide 163
~~Annex E (normative) Ball-pressure test ..... ~~
Annex E (normative) Relation between rated impulse withstand voltage, rated voltage and overvoltage category 168
Annex F (normative) Pollution degree 169
~~Annex G (informative) Schematic diagram of families of terminals ..... ~~
Annex G (normative) Impulse voltage test 170
~~Annex H (informative) Flat quick-connect terminations, method for selection of female connectors ..... ~~
Annex H (normative) Altitude correction factors 171

This is a preview - click here to buy the full publication

Annex I (normative) Types of coatings for rigid printed board assemblies 172
~~Annex J (informative) Selection and sequence of tests of clause 21 .....~~
Annex J (normative) Measuring the insulation distance of a coated printed board with type 1 coating 173
Annex K (normative) Routine tests 174
Annex L (informative) Sampling tests 175
Annex M (normative) Switch families 177
Annex N (informative) Dimensions of tabs forming part of a switch 179
Annex O (informative) Common end product standards 180
Bibliography 181

Figure 1 – Examples of pillar terminals 139
Figure 2 – Examples of screw terminals and stud terminals 140
Figure 3 – Examples of saddle terminals 141
Figure 4 – Examples of lug terminals 141
Figure 5 – Examples of mantle terminals 142
Figure 6 – Examples of screwless terminals 143
~~Figure 7 – Tabs of flat quick-connect terminations .....~~
Figure 7 – Example of female (test) connector of flat quick-connect terminations 145
Figure 8 – Circuit for capacitive load test and simulated tungsten filament lamp load test for AC circuits 146
Figure 9 – Circuit for capacitive load test and simulated lamp load test for DC circuits 147
Figure 10 – Values of the capacitive load test circuit for test of switches rated 10/100 A 250 V~ 148
Figure 11 – Mounting device for the impact tests 149
~~Figure 12 – Ball pressure apparatus .....~~
Figure 12 – Continuous duty – Duty type S1 (see 7.18.1) 151
~~Figure 13 – Test pin .....~~
Figure 13 – Short-time duty – Duty type S2 (see 7.18.2) 151
Figure 14 – Intermittent periodic duty – Duty-type S3 (see 7.18.3) 151
Figure 15 – Diagram for heating test 151
Figure 16 – Diagram for endurance test 152
Figure J.1 – Measurement of the insulation distance 173

~~Table 1 – Test specimens .....~~
Table 1 – Test loads for multiway switches 33
Table 2 – Type and connection of switches *(1 of 8)* 44
Table 3 – Switch information and loads placed in groups 52
Table 4 – Resistive current carried by the terminal and related cross-sectional areas of terminals for unprepared conductors 77
~~Table 5 – Maximum diameters of circular copper conductors .....~~
Table 5 – Terminal test sequence 79
Table 6 – Pulling forces for screw-type terminals 81
~~Table 7 – Material and plating for tabs .....~~

This is a preview - click here to buy the full publication

Table 7 – Minimum insulation resistance 89
~~Table 8 – Push and pull forces for tabs ..... ~~
Table 8 – Dielectric strength 90
~~Table 9 – Test conditions for Ta ..... ~~
Table 9 – Minimum values of pull force 110
~~Table 10 – Test conditions for Tb ..... ~~
Table 10 – Torque values 113
Table 11 – Torque values for screwed glands 113
Table 12 – Minimum clearances for basic insulation 117
~~Table 13 – Permissible maximum temperatures ..... ~~
Table 13 – Minimum creepage distances for basic insulation 119
~~Table 14 – Temperatures for thermosetting materials used for electronic switches ..... ~~
Table 14 – Minimum creepage distances for functional insulation 120
~~Table 15 – Electrical endurance tests for the different types of electronic switches with or without electrical contact(s) ..... ~~
Table 15 – Test levels and conditions 122
~~Table 16 – Test loads for multiway switches ..... ~~
Table 16 – Minimum requirements for capacitors 133
~~Table 17 – Test loads for electrical endurance tests for a.c. circuits ..... ~~
Table 17 – Test levels and duration for voltage dips and short interruptions 135
~~Table 18 – Test loads for electrical endurance tests for d.c. circuits ..... ~~
Table 18 – Fast transient bursts 136
~~Table 26 – Conventional fusing current versus rated current ..... ~~
Table A.1 – Minimum values for distances with specific pollution degrees 153
Table E.1 – Rated impulse withstand voltage for switches energized directly from the low voltage mains 168
Table G.1 – Test voltages for verifying clearances at sea-level 170
~~Table H.1 – Insertion and withdrawal forces for flat quick-connect terminations ..... ~~
Table H.1 – Altitude correction factors 171

This is a preview - click here to buy the full publication

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SWITCHES FOR APPLIANCES –

Part 1: General requirements

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

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8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.

9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

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.

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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.

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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".~~

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~~– 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)~~

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

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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*~~

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~~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 coating~~s 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*~~

~~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).~~

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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).~~

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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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CONTENTS

FOREWORD....6
1 Scope....8
2 Normative references....9
3 Terms and definitions....11
3.1 General terms and definitions....11
3.2 Terms and definitions relating to voltage and current....13
3.3 Terms and definitions relating to the different types of switches....15
3.4 Terms and definitions relating to the operation of the switch....16
3.6 Terms and definitions relating to terminals and terminations....17
3.7 Terms and definitions relating to insulation....18
3.8 Terms and definitions relating to pollution....20
3.9 Terms and definitions relating to manufacturers' tests....20
4 General requirements....20
5 General information on tests....21
5.1 Testing shall be performed according to the general guideline information provided in Clause 5....21
5.2 Electrical information....21
5.3 Test loads on multiway switches....22
5.4 Test specimens....22
6 Rating....23
7 Classification....23
7.1 According to nature of supply....23
7.2 According to type of load to be controlled by each circuit of the switch....23
7.3 According to ambient temperature....23
7.4 According to number of operating cycles....24
7.5 Degree of protection against solid foreign objects....24
7.6 Degree of protection against ingress of water....24
7.7 According to degree of protection against electric shock for an incorporated switch for use in....25
7.8 According to degree of pollution inside the switch....25
7.9 According to degree of pollution outside the switch....25
7.10 According to marking....25
7.11 According to resistance to ignitability by the glow wire temperature....25
7.12 According to the rated impulse withstand voltage....26
7.13 According to the rated overvoltage category....26
7.14 According to type of disconnection....26
7.15 According to the type of coating for rigid printed board assemblies....26
7.16 According to type and/or connection of switches....26
7.17 According to configuration of switching device....27
7.18 According to duty type....27
7.19 According to linkage between contact and actuator speed....27
7.20 According to the type of terminals....27
7.21 According to the type of built in protection....28
7.22 According to the type of forced cooling....28
7.23 According to the capacitor provided with the switch....29
8 Marking and documentation....36

This is a preview - click here to buy the full publication

8.1 Switch information ... 36
8.2 Symbols ... 39
8.3 Load rating ... 40
8.4 Temperature rating ... 42
8.5 Operating cycles ... 43
8.6 Switches intended for use in Class II equipment or appliances ... 43
8.7 Required marking ... 43
8.8 Legibility and durability of marking ... 43
8.9 Switches with their own enclosure ... 44
9 Protection against electric shock ... 44
10 Provision for earthing ... 46
11 Terminals and terminations ... 47
11.1 Common requirements to terminals ... 47
11.2 Fixing of terminals ... 49
11.3 Location and shielding of terminals ... 49
11.4 Terminals for interconnection of more than one conductors ... 49
11.5 Thermal stress ... 49
11.6 Test sequences ... 50
11.7 Conductor escape test (TT1) ... 50
11.8 Terminal displacement test (TT2) ... 51
11.9 Strand escape test (TT3) ... 52
11.10 Multiple conductors (TT4) ... 53
12 Construction ... 53
12.1 Constructional requirements relating to protection against electric shock ... 53
12.2 Constructional requirements relating to safety during mounting and normal operation of the switch ... 54
12.3 Constructional requirements relating to the mounting of switches and to the attachment of cords ... 54
13 Mechanism ... 55
14 Protection against ingress of solid foreign objects, ingress of water and humid conditions ... 56
14.1 Protection against ingress of solid foreign objects ... 56
14.2 Protection against ingress of water ... 56
14.3 Protection against humid conditions ... 57
15 Insulation resistance and dielectric strength ... 58
15.1 General requirements ... 58
15.2 Measurement of insulation resistance ... 58
15.3 Insulation test voltage ... 59
16 Heating ... 60
16.1 General requirements ... 60
16.2 Contacts and terminals ... 60
16.3 Other parts ... 60
16.4 Heating test ... 60
17 Endurance ... 61
18 Mechanical strength ... 61
18.1 General requirements ... 61
18.2 Impact ... 61
18.3 Pull ... 62

This is a preview - click here to buy the full publication

18.4 Push 62
19 Screws, current-carrying parts and connections 63
19.1 General requirements for electrical connections 63
19.2 Screwed connections 63
19.3 Current-carrying parts 66
20 Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies 66
20.1 General requirements 66
20.2 Clearances 67
20.3 Clearances for disconnection 68
20.4 Creepage distances 69
20.5 Solid insulation 72
20.6 Coatings of rigid printed board assemblies 72
21 Fire hazard 73
21.1 Resistance to heat 73
21.2 Resistance to abnormal heat 74
22 Resistance to rusting 75
23 Abnormal operation and fault conditions for switches 75
24 Components for switches 75
24.1 General requirements 75
24.2 Protective devices 76
24.3 Capacitors 78
24.4 Resistors 79
25 EMC requirements 79
25.1 General 79
25.2 Immunity 80
25.3 Emission 82
Annex A (normative) Measurement of clearances and creepage distances 96
Annex B (informative) Diagram for the dimensioning of clearances and creepage distances 102
Annex C (normative) Proof tracking test 103
Annex D (informative) Switch application guide 104
Annex E (normative) Relation between rated impulse withstand voltage, rated voltage and overvoltage category 106
Annex F (normative) Pollution degree 107
Annex G (normative) Impulse voltage test 108
Annex H (normative) Altitude correction factors 109
Annex I (normative) Types of coatings for rigid printed board assemblies 110
Annex J (normative) Measuring the insulation distance of a coated printed board with type 1 coating 111
Annex K (normative) Routine tests 112
Annex L (informative) Sampling tests 113
Annex M (normative) Switch families 115
Annex N (informative) Dimensions of tabs forming part of a switch 117
Annex O (informative) Common end product standards 118
Bibliography 119

This is a preview - click here to buy the full publication

Figure 1 – Examples of pillar terminals 84
Figure 2 – Examples of screw terminals and stud terminals 85
Figure 3 – Examples of saddle terminals 86
Figure 4 – Examples of lug terminals 86
Figure 5 – Examples of mantle terminals 87
Figure 6 – Examples of screwless terminals 88
Figure 7 – Example of female (test) connector of flat quick-connect terminations 89
Figure 8 – Circuit for capacitive load test and simulated tungsten filament lamp load test for AC circuits 90
Figure 9 – Circuit for capacitive load test and simulated lamp load test for DC circuits 91
Figure 10 – Values of the capacitive load test circuit for test of switches rated 10/100 A 250 V~ 92
Figure 11 – Mounting device for the impact tests 93
Figure 12 – Continuous duty – Duty type S1 (see 7.18.1) 94
Figure 13 – Short-time duty – Duty type S2 (see 7.18.2) 94
Figure 14 – Intermittent periodic duty – Duty-type S3 (see 7.18.3) 94
Figure 15 – Diagram for heating test 94
Figure 16 – Diagram for endurance test 95
Figure J.1 – Measurement of the insulation distance 111

Table 1 – Test loads for multiway switches 22
Table 2 – Type and connection of switches 29
Table 3 – Switch information and loads placed in groups 37
Table 4 – Resistive current carried by the terminal and related cross-sectional areas of terminals for unprepared conductors 48
Table 5 – Terminal test sequence 50
Table 6 – Pulling forces for screw-type terminals 52
Table 7 – Minimum insulation resistance 59
Table 8 – Dielectric strength 59
Table 9 – Minimum values of pull force 62
Table 10 – Torque values 65
Table 11 – Torque values for screwed glands 65
Table 12 – Minimum clearances for basic insulation 68
Table 13 – Minimum creepage distances for basic insulation 70
Table 14 – Minimum creepage distances for functional insulation 71
Table 15 – Test levels and conditions 73
Table 16 – Minimum requirements for capacitors 79
Table 17 – Test levels and duration for voltage dips and short interruptions 80
Table 18 – Fast transient bursts 81
Table A.1 – Minimum values for distances with specific pollution degrees 96
Table E.1 – Rated impulse withstand voltage for switches energized directly from the low voltage mains 106
Table G.1 – Test voltages for verifying clearances at sea-level 108
Table H.1 – Altitude correction factors 109

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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.

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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.

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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".

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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*

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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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SOMMAIRE

AVANT-PROPOS 125
1 Domaine d'application 127
2 Références normatives 128
3 Termes et définitions 130
3.1 Termes et définitions généraux 130
3.2 Termes et définitions relatifs à la tension et au courant 132
3.3 Termes et définitions relatifs aux différents types d'interrupteurs 134
3.4 Termes et définitions relatifs au fonctionnement de l'interrupteur 135
3.5 Termes et définitions relatifs au raccordement de l'interrupteur 136
3.6 Termes et définitions relatifs aux bornes et aux terminaisons 136
3.7 Termes et définitions relatifs à l'isolation 137
3.8 Termes et définitions relatifs à la pollution 139
3.9 Termes et définitions relatifs aux essais du fabricant 139
4 Exigences générales 140
5 Informations générales sur les essais 140
5.1 Les essais doivent être réalisés conformément aux directives générales données à l'Article 5 140
5.2 Informations électriques 141
5.3 Charges d'essai appliquées aux interrupteurs à directions multiples 142
5.4 Eprouvettes d'essai 142
6 Caractéristiques assignées 142
7 Classification 142
7.1 Selon la nature de l'alimentation 142
7.2 Selon le type de charge à commander par chaque circuit de l'interrupteur 143
7.3 Selon la température ambiante 143
7.4 Selon le nombre de cycles de manœuvres 143
7.5 Selon le degré de protection contre les corps solides étrangers 144
7.6 Selon le degré de protection contre la pénétration de l'eau 144
7.7 Selon le degré de protection contre les chocs électriques de l'appareil équipé d'un interrupteur 145
7.8 Selon le degré de pollution à l'intérieur de l'interrupteur 145
7.9 Selon le degré de pollution à l'extérieur de l'interrupteur 145
7.10 Selon le marquage 145
7.11 Selon la résistance à l'inflammabilité à la température du fil incandescent 145
7.12 Selon la tension de tenue aux chocs assignée 146
7.13 Selon la catégorie de surtension assignée 146
7.14 Selon le type de coupure 146
7.15 Selon le type de revêtement pour les cartes imprimées rigides équipées 146
7.16 Selon le type et/ou le raccordement des interrupteurs 146
7.17 Selon la configuration du dispositif de coupure 147
7.18 Selon le service type 147
7.19 Selon la liaison entre le contact et la vitesse de l'actionneur 147
7.20 Selon le type des bornes 147
7.21 Selon le type de protection intégrée 148
7.22 Selon le type de refroidissement forcé 148
7.23 Selon le condensateur fourni avec l'interrupteur 149

This is a preview - click here to buy the full publication

8 Marquage et documentation ... 157
8.1 Informations sur les interrupteurs ... 157
8.2 Symboles ... 160
8.3 Charges assignées ... 161
8.4 Températures assignées ... 164
8.5 Cycle de manœuvres ... 164
8.6 Interrupteurs prévus pour une utilisation sur des équipements ou appareils de Classe II ... 165
8.7 Marquage obligatoire ... 165
8.8 Lisibilité et durabilité du marquage ... 165
8.9 Interrupteurs possédant leur propre enveloppe ... 165
9 Protection contre les chocs électriques ... 166
10 Dispositions en vue de la mise à la terre ... 168
11 Bornes et terminaisons ... 169
11.1 Exigences communes aux bornes ... 169
11.2 Fixation des bornes ... 171
11.3 Positionnement et protection des bornes ... 171
11.4 Bornes destinées au raccordement de plus d'un conducteur ... 172
11.5 Contrainte thermique ... 172
11.6 Séquences d'essai ... 172
11.7 Essai de traction des conducteurs (TT1) ... 172
11.8 Essai de la fixation des bornes (TT2) ... 173
11.9 Essai avec un brin libre (TT3) ... 175
11.10 Conducteurs multiples (TT4) ... 175
12 Construction ... 175
12.1 Exigences de construction relatives à la protection contre les chocs électriques ... 175
12.2 Exigences de construction relatives à la sécurité pendant le montage et la manœuvre normale de l'interrupteur ... 176
12.3 Exigences de construction relatives au montage des interrupteurs et à la fixation des câbles ... 177
13 Mécanisme ... 178
14 Protection contre la pénétration de corps solides étrangers, la pénétration de l'eau et les conditions d'humidité ... 179
14.1 Protection contre la pénétration des corps solides étrangers ... 179
14.2 Protection contre la pénétration de l'eau ... 179
14.3 Protection contre l'humidité ... 180
15 Résistance d'isolement et rigidité diélectrique ... 181
15.1 Exigences générales ... 181
15.2 Mesure de la résistance d'isolement ... 181
15.3 Tension d'essai diélectrique ... 182
16 Echauffements ... 183
16.1 Exigences générales ... 183
16.2 Contacts et bornes ... 184
16.3 Autres parties ... 184
16.4 Essai d'échauffement ... 184
17 Endurance ... 185
18 Résistance mécanique ... 185

This is a preview - click here to buy the full publication

18.1 Exigences générales ... 185
18.2 Impact ... 185
18.3 Traction ... 186
18.4 Poussée ... 187
19 Vis, parties conduisant le courant et raccordements ... 187
19.1 Exigences générales pour les connexions électriques ... 187
19.2 Connexions vissées ... 187
19.3 Parties transportant le courant ... 190
20 Distances d'isolement dans l'air, lignes de fuite, isolation solide et revêtements des cartes imprimées équipées rigides ... 190
20.1 Exigences générales ... 190
20.2 Distances d'isolement dans l'air ... 191
20.3 Distance d'isolement dans l'air pour une coupure ... 192
20.4 Lignes de fuite ... 193
20.5 Isolation solide ... 196
20.6 Revêtements des cartes imprimées rigides équipées ... 196
21 Danger d'incendie ... 197
21.1 Résistance à la chaleur ... 197
21.2 Résistance à la chaleur anormale ... 198
22 Protection contre la rouille ... 199
23 Fonctionnement anormal et conditions de défaut pour les interrupteurs ... 199
24 Composants pour interrupteurs ... 200
24.1 Exigences générales ... 200
24.2 Dispositifs de protection ... 200
24.3 Condensateurs ... 203
24.4 Résistances ... 203
25 Exigences CEM ... 203
25.1 Généralités ... 203
25.2 Immunité ... 204
25.3 Emission ... 207
Annexe A (normative) Mesure des lignes de fuite et des distances d'isolement dans l'air ... 220
Annexe B (informative) Diagramme pour le dimensionnement des distances d'isolement dans l'air et des lignes de fuite ... 226
Annexe C (normative) Essai de tenue au cheminement ... 227
Annexe D (informative) Guide d'application de l'interrupteur ... 228
Annexe E (normative) Relation entre tension de tenue aux chocs assignée, tension assignée et catégorie de surtension ... 230
Annexe F (normative) Degré de pollution ... 231
Annexe G (normative) Essai de tension d'impulsion ... 232
Annexe H (normative) Facteurs de correction d'altitude ... 234
Annexe I (normative) Types de revêtements pour les cartes imprimées rigides équipées ... 235
Annexe J (normative) Mesure de la distance d'isolement d'une carte imprimée avec revêtement de type 1 ... 236
Annexe K (normative) Essais individuels de série ... 237
Annexe L (informative) Essais sur prélèvement ... 238
Annexe M (normative) Familles d'interrupteurs ... 240

This is a preview - click here to buy the full publication

Annexe N (informative) Dimensions des languettes faisant partie d'un interrupteur 242
Annexe O (informative) Normes de produits finaux applicables 243
Bibliographie 244

Figure 1 – Exemples de bornes à trous 208
Figure 2 – Exemples de bornes à serrage sous tête de vis et de bornes à goujon fileté 209
Figure 3 – Exemples de bornes à plaquettes 210
Figure 4 – Exemples de bornes pour cosses et barrettes 210
Figure 5 – Exemples de bornes à capot taraudé 211
Figure 6 – Exemples de bornes sans vis 212
Figure 7 – Exemple de clip (d'essai) de bornes plates à connexion rapide 213
Figure 8 – Circuit pour l'essai de charge capacitive et l'essai de charge de lampe à filament de tungstène simulée pour les circuits à courant alternatif 214
Figure 9 – Circuit pour l'essai de charge capacitive et l'essai de charge de lampe simulée pour les circuits à courant continu 215
Figure 10 – Valeurs du circuit d'essai de charge capacitive pour les essais d'interrupteurs de valeurs assignées 10/100 A 250 V~ 216
Figure 11 – Dispositif de montage pour les essais de choc 217
Figure 12 – Service continu – Service type S1 (voir 7.18.1) 218
Figure 13 – Service temporaire – Service type S2 (voir 7.18.2) 218
Figure 14 – Service périodique intermittent – Service type S3 (voir 7.18.3) 218
Figure 15 – Diagramme pour l'essai d'échauffement 218
Figure 16 – Diagramme pour l'essai d'endurance 219
Figure J.1 – Mesure de la distance d'isolement 236

Tableau 1 – Essais de charge des interrupteurs à directions multiples 142
Tableau 2 – Nature et raccordement des interrupteurs *(1 de 7)* 150
Tableau 3 – Informations relatives aux interrupteurs et aux charges placées dans les groupes 158
Tableau 4 – Courant résistif transporté par la borne et sections correspondantes des bornes pour conducteurs non préparés 170
Tableau 5 – Séquence d'essai des bornes 172
Tableau 6 – Forces de traction pour les bornes à vis 175
Tableau 7 – Résistance d'isolement minimale 182
Tableau 8 – Rigidité diélectrique 183
Tableau 9 – Valeurs minimales de la force de traction 186
Tableau 10 – Valeurs des couples 189
Tableau 11 – Valeurs du couple pour les presse-étoupes filetés 189
Tableau 12 – Distances minimales d'isolement dans l'air pour l'isolation principale 192
Tableau 13 – Lignes de fuite minimales pour l'isolation principale 194
Tableau 14 – Lignes de fuite minimales pour l'isolation fonctionnelle 195
Tableau 15 – Niveaux et conditions d'essai 197
Tableau 16 – Exigences minimales pour condensateurs 203
Tableau 17 – Niveaux et durée d'essai pour les creux de tension et les coupures brèves 205

This is a preview - click here to buy the full publication

Tableau 18 – Pics de surtensions transitoires rapides 206
Tableau A.1 – Valeurs de distances minimales pour des degrés de pollution spécifiques 220
Tableau E.1 – Tension de tenue aux chocs assignée pour les interrupteurs alimentés directement par le réseau basse tension 230
Tableau G.1 – Tensions d'essai pour la vérification des distances d'isolement dans l'air au niveau de la mer 233
Tableau H.1 – Facteurs de correction d'altitude 234

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

INTERRUPTEURS POUR APPAREILS –

Partie 1: Exigences générales

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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.

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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

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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".

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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*

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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*

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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*