

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Switches for household and similar fixed electrical installations –
Part 2-1: Particular requirements – Electronic control devices**

**Interrupteurs pour installations électriques à fils domestiques et analogues –
Partie 2-1: Exigences particulières – Dispositifs de commande électronique**



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CONTENTS

FOREWORD.....	6
1 Scope.....	8
2 Normative references	9
3 Terms and definitions	11
4 General requirements	15
5 General remarks on tests	15
6 Ratings.....	18
7 Classification.....	18
8 Marking	20
9 Checking of dimensions.....	23
10 Protection against electrical shock.....	23
11 Provision for earthing	26
12 Terminals	26
13 Constructional requirements	27
14 Mechanism	29
15 Resistance to ageing, protection provided by enclosure of switches and resistance to humidity.....	29
16 Insulation resistance and electric strength	29
17 Temperature rise	31
18 Making and breaking capacity.....	35
19 Normal operation	37
20 Mechanical strength	44
21 Resistance to heat.....	45
22 Screws, current-carrying parts and connections.....	45
23 Creepage distances, clearance and distances through sealing compound.....	45
24 Resistance of insulating material to abnormal heat, to fire and to tracking	52
25 Resistance to rusting.....	52
26 EMC requirements.....	52
101 Abnormal condition	62
102 Components.....	67
103 Electromagnetic fields (EMF).....	71
Annex A (normative) <i>Replacement of title to Annex A as follows: Additional requirements for electronic control devices having facilities for the outlet and retention of flexible cables</i>	76
Annex B (informative) Changes planned for the future in order to align IEC 60669-1 with the requirements of IEC 60998 (all parts), IEC 60999 (all parts) and IEC 60228	77
Annex C (informative) Circuit development (19.3)	78
Annex D (informative) Additional requirements for insulation-piercing terminals.....	79
Annex E (informative) Additional requirements and tests for switches intended to be used at a temperature lower than –5 °C.....	80
Annex AA (informative) Examples of types of electronic switches or HBES/BACS switches and their functions	85
Annex BB (informative) Circuit development: 19.106 explained.....	86

Annex CC (normative) Additional requirements for electronic control devices using DLT-technology in accordance with IEC 62756-1	91
Annex DD (informative) Test set-ups	93
Annex EE (informative) Electrical interface specification for phase-cut dimmer in phase-cut dimmed lighting systems.....	100
Annex FF (normative) Requirements for electronic RCS and electronic TDS that provide the function, markings and connection configuration in accordance with IEC 60669-2-2 and IEC 60669-2-3	131
Bibliography.....	136
Figure 101 – Protective separation between circuits	7
Figure 102 – Current path tested in the looping through circuit	72
Figure 103 – Circuit diagram for testing electronic switches and HBES/BACS switches according to 17.101 and 101.4.....	72
Figure 104 – Minimum creepage and clearances on printed circuit boards.....	73
Figure 105 – Surge test	74
Figure BB.1 – 120 V 15 W (LT spice model).....	87
Figure BB.2 – 230 V 15 W (LT spice model).....	88
Figure BB.3 – Model for multiple lamp loads	89
Figure BB.4 – I_{peak} and I^2t for multiple lamp loads	90
Figure DD.1 – Test setup for AC mains connection according to IEC 61000-4-4.....	93
Figure DD.2 – Test setup for bus and DC mains connection according to IEC 61000-4-4	94
Figure DD.3 – Test setup for AC mains connection according to IEC 61000-4-5.....	95
Figure DD.4 – Test setup for bus and DC mains connection according to IEC 61000-4-5	96
Figure DD.5 – Test setup for the EMI according to IEC 61000-4-2	97
Figure DD.6 – Test setup for AC mains connection according to IEC 61000-4-6.....	98
Figure DD.7 – Test setup for bus and DC mains connection according to IEC 61000-4-6	99
Figure EE.1 – Example of wiring diagram.....	103
Figure EE.2 – Timing leading edge dimming method.....	106
Figure EE.3 – Timing trailing edge dimming method	111
Figure EE.4 – Circuit to test the properties of the phase-cut dimmer during the non-conducting phase (Method 1).....	117
Figure EE.5 – Circuit to test the properties of the phase-cut dimmer during the non-conducting phase (Method 2).....	118
Figure EE.6 – Circuit to test the properties of the phase-cut dimmer during the transition from the non-conducting to the conducting phase	119
Figure EE.7 – Circuit to test the properties of the phase-cut dimmer during the electronic off-state	121
Figure EE.8 – Waveform of AC voltage source – Leading edge.....	122
Figure EE.9 – Waveform of AC voltage source – Trailing edge	122
Figure EE.10 – Equivalent circuit for controlgear in the on state to be used during dimmer tests	123
Figure EE.11 – Equivalent circuit for controlgear being in off state.....	124
Figure EE.12 – Test enclosure.....	127

Figure EE.13 – Geometry of microphone placement in regard to device under test	127
Figure EE.14 – Test circuit to test stability of phase angle	128
Figure EE.15 – Possibilities for proper triggering	129
Figure EE.16 – Equivalent circuit EC_CG2	130
Table 1 – Number of specimens needed for the tests	16
Table 15 – Test voltage, points of application and minimum values of insulating resistance for the verification of electric strength	29
Table 101 – Permissible temperature rise values	33
Table 102 – Application of tests for making and breaking capacity and normal operation for electronic switches and HBES/BACS switches according to 7.102.2	30
Table 103 – Relationship between rated current and capacitance	40
Table 104 – Values for I_{peak} and I^2t depending on the type of distribution system	42
Table 105 – Calculated circuit parameters	43
Table 106 – Test loads for HBES/BACS switches for heating installations	44
Table 23 – Creepage distances, clearances and distances through insulating sealing compound	45
Table 107 – Relation between the rated voltage of the HBES/BACS switch, the rated insulation voltage and the rated impulse voltage	48
Table 108 – Minimum clearances without verification test	49
Table 109 – Test voltages and corresponding altitude	50
Table 110 – Minimum clearances with verification test	50
Table 111 – Minimum creepage distances of basic, supplementary and reinforced insulation without verification test for clearances	51
Table 112 – Minimum creepage distances of basic, supplementary and reinforced insulation with verification test for clearances	51
Table 113 – Immunity tests (overview)	54
Table 114 – Voltage dip and short-interruption test values	55
Table 115 – Surge immunity test voltages	56
Table 116 – Fast transient test values	57
Table 117 – Values for radiated electromagnetic field test of IEC 61000-4-3 ^a	59
Table 118 – Measurement methods	62
Table 119 – Protection methods and test conditions	64
Table 120 – Capacitors	68
Table A.101 – Maximum current and minimum cross-sectional area	76
Table EE.1 – Energy for impact tests	83
Table AA.1 – Functions overview	85
Table BB.1 – Lamp	86
Table EE.1 – Nominal mains voltage 100 V – Frequency 50 Hz or 60 Hz	107
Table EE.2 – Nominal mains voltage 120 V – Frequency 50 Hz or 60 Hz	107
Table EE.3 – Nominal mains voltage 200 V – Frequency 50 Hz or 60 Hz	107
Table EE.4 – Nominal mains voltage 230 V – Frequency 50 Hz or 60 Hz	107
Table EE.5 – Nominal mains voltage 277 V – Frequency 50 Hz or 60 Hz	107
Table EE.6 – Slew rate for voltage decrease across the phase-cut dimmer	108

Table EE.7 – Nominal mains voltage 100 V – Frequency 50 Hz or 60 Hz	109
Table EE.8 – Nominal mains voltage 120 V – Frequency 50 Hz or 60 Hz	109
Table EE.9 – Nominal mains voltage 200 V – Frequency 50 Hz or 60 Hz	109
Table EE.10 – Nominal mains voltage 230 V – Frequency 50 Hz or 60 Hz	109
Table EE.11 – Nominal mains voltage 277 V – Frequency 50 Hz or 60 Hz	110
Table EE.12 – Nominal mains voltage from 100 V to 277 V – Frequency 50 Hz or 60 Hz.....	112
Table EE.13 – Nominal mains voltage 100 V – Frequency 50 Hz or 60 Hz	113
Table EE.14 – Nominal mains voltage 120 V – Frequency 50 Hz or 60 Hz	113
Table EE.15 – Nominal mains voltage 200 V – Frequency 50 Hz or 60 Hz	113
Table EE.16 – Nominal mains voltage 230 V – Frequency 50 Hz or 60 Hz	114
Table EE.17 – Nominal mains voltage 277 V – Frequency 50 Hz or 60 Hz	114
Table EE.18 – Currents and voltages for controlgear during the electronic off state	115
Table EE.19 – Parameters for testing purposes	116
Table EE.20 – Parameters for testing purposes	125

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SWITCHES FOR HOUSEHOLD AND
SIMILAR FIXED ELECTRICAL INSTALLATIONS –****Part 2-1: Particular requirements – Electronic control devices**

FOREWORD

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International Standard IEC 60669-2-1 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories.

This fifth edition cancels and replaces the fourth edition published in 2002, Amendment 1:2008 and Amendment 2:2015. This edition constitutes a technical revision.

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

- a) incorporation of the requirements for HBES switches, previously included in IEC 60669-2-5;
- b) modification of 19.106, test and requirements for switches for LEDs;
- c) general indication to cover electronic control devices;
- d) test for looping through.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
23B/1326/FDIS	23B/1342/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

This part of IEC 60669 is to be used in conjunction with IEC 60669-1:2017, hereinafter referred to as Part 1. It lists the changes necessary to convert that standard into a specific standard for electronic control devices.

In this document, the following print types are used:

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

Subclauses, figures, tables or notes which are additional to those in Part 1 are numbered starting from 101.

A list of all the parts in the IEC 60669 series, published under the general title *Switches for household and similar fixed electrical installations*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
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- amended.

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SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS –

Part 2-1: Particular requirements – Electronic control devices

1 Scope

This clause of Part 1 is completely replaced by the following:

This part of IEC 60669 applies to electronic control devices, a general term to cover electronic switches, home and building electronic systems (HBES) / building automation and control systems (BACS) switches and electronic extension units.

It applies to electronic switches and to HBES/BACS switches, for alternating current (AC) only with a rated switching voltage not exceeding 250 V and a rated current not exceeding 16 A, intended for household and similar fixed electrical installations, either indoors or outdoors.

It also applies to electronic extension units with a rated supply voltage not exceeding 250 V AC and 120 V DC, such as sensors and push buttons.

This document also applies to electronic remote control switches (RCS) and electronic time delay switches (TDS). Particular requirements are given in Annex FF.

Switches including only passive components such as resistors, capacitors, inductors, positive temperature coefficient (PTC) and negative temperature coefficient (NTC) components, varistors, printed wiring boards and connectors are not considered as electronic control devices.

This document also applies to electronic switches and HBES/BACS switches for the operation of lighting equipment circuits and the control of the brightness of lighting equipment (dimmers) as well as the control of the speed of motors (for example, those used in ventilating fans) and for other purposes (for example, heating controls).

The operation and/or control as mentioned above can be transmitted by an electronic signal via several media, for example, powerline (mains), twisted pair, optical fibre, radio frequency, infrared, etc. and are performed:

- intentionally by a person via an actuating member, a key, a card, etc., via a sensing surface or a sensing unit, by means of touch, proximity, turn, optical, acoustic, thermal;
- by physical means, for example, light, temperature, humidity, time, wind velocity, presence of people,
- by any other influence.

This document also applies to electronic control devices which include integrated radio receivers and transmitters.

This document covers only those requirements for mounting boxes which are necessary for the tests on the electronic control devices.

Requirements for general purpose mounting boxes are given in the relevant part, if any, of IEC 60670.