



SLOVENSKI STANDARD

SIST EN 60669-2-1:2005

01-januar-2005

Nadomešča:

SIST EN 60669-2-1:2001

SIST EN 60669-2-1:2001/A2:2003

SIST EN 60669-2-1:2001/IS1:2006

**Stikala za gospodinjstva in podobne nepremične električne inštalacije – 2-1. del:
Posebne zahteve – Elektronska stikala (IEC 60669-2-1:2002, spremenjen) (vsebuje
popravek AC:2007)**

Switches for household and similar fixed electrical installations -- Part 2-1: Particular requirements - Electronic switches

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Schalter für Haushalt und ähnliche ortsfeste elektrische Installationen -- Teil 2-1:
Besondere Anforderungen Elektronische Schalter

9695c531fa92/sist-en-60669-2-1-2005

Interrupteurs pour installations électriques fixes domestiques et analogues -- Partie 2-1:
Prescriptions particulières - Interrupteurs électroniques

Ta slovenski standard je istoveten z: EN 60669-2-1:2004

ICS:

29.120.40 Stikala Switches

SIST EN 60669-2-1:2005 en

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EUROPEAN STANDARD

EN 60669-2-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2004

ICS 29.120.40

Supersedes EN 60669-2-1:2000 + A2:2001 & EN 60669-2-1:2000/IS1:2004

English version

Switches for household and similar fixed electrical installations
Part 2-1: Particular requirements –
Electronic switches
(IEC 60669-2-1:2002, modified)

Interrupteurs pour installations électriques
fixes domestiques et analogues
Partie 2-1: Prescriptions particulières -
Interrupteurs électroniques
(CEI 60669-2-1:2002, modifiée)

Schalter für Haushalt und ähnliche
ortsfeste elektrische Installationen
Teil 2-1: Besondere Anforderungen -
Elektronische Schalter
(IEC 60669-2-1:2002, modifiziert)

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This European Standard was approved by CENELEC on 2004-07-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of the International Standard IEC 60669-2-1:2002, prepared by SC 23B, Plugs, socket-outlets and switches, of IEC TC 23, Electrical accessories, together with the common modifications prepared by the Technical Committee CENELEC TC 23B, Switches for household and similar fixed electrical installations, was submitted to the formal vote and was approved by CENELEC as EN 60669-2-1 on 2004-07-01.

This European Standard supersedes EN 60669-2-1:2000 + A2:2001 + IS1:2004.

This part 2-1 of EN 60669 is to be used in conjunction with EN 60669-1:1999. It lists the changes necessary to convert that standard into a specific standard for electronic switches.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2005-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2009-07-01

This European Standard was prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and supports the essential requirements of Directive 89/336/EEC.

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Annexes ZA, ZB and ZC have been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 60669-2-1:2002 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

2 Normative references

Replace the text of Clause 2 by:

NOTE Normative references to international publications are listed in Annex ZA (normative).

13 Constructional requirements

13.103 Replace NOTE 2 by:

NOTE 2 See Annex ZB for special national conditions.

19 Normal operation

19.102 Add after the first paragraph:

This is not applicable to dimmers for step-down converters as these accessories are tested according to 19.101.

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101 Abnormal conditions

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101.1.1.2 Add the following note:

NOTE The tripping current of the protective devices (e.g. fuses, automatic protective devices, etc.) to be used for the verification of electronic switches without incorporated temperature-limiting devices and without incorporated fuses shall be in accordance with the rated current of the protective device, specified by the manufacturer, intended to protect the electronic switch.

The manufacturers should specify in the instruction sheets provided with the products the information regarding the protective device which is intended to protect the electronic switch.

102 Components

102.4.1.2 Replace the note by the following test requirement:

For cut-outs in electronic switches for fluorescent lamps, the tests shall be carried out in the same way as for electronic switches for incandescent lamps.

Bibliography

Add the following note:

NOTE Harmonized as EN 61058-1:2002 (modified)

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60065 (mod)	2001	Audio, video and similar electronic apparatus - Safety requirements	EN 60065	2002
IEC 60085	1984	Thermal evaluation and classification of electrical insulation	HD 566 S1	1990
IEC 60127	Series	Miniature fuses	EN 60127	Series
IEC 60227-5	1997	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V Part 5: Flexible cables (cords)	-	-
IEC 60317-0-1	1997	Specifications for particular types of winding wires Part 0-1: General requirements - Enamelled round copper wire	EN 60317-0-1	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 60730 (mod)	Series	Automatic electrical controls for household and similar use	EN 60730	Series
IEC 61000-2-2	2002	Electromagnetic compatibility (EMC) Part 2-2: Environment - Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems	EN 61000-2-2	2002
IEC 61000-3-2 (mod)	2000	Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)	EN 61000-3-2	2000
IEC 61000-3-3	1994	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	EN 61000-3-3 + Corr. July	1995 1997

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-2	1995	Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	1995
IEC 61000-4-3	2002	Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2002
IEC 61000-4-4	1995	Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	1995
IEC 61000-4-5	1995	Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	1995
IEC 61000-4-6	1996	Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	1996
IEC 61000-4-8	1993	Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	1993
IEC 61000-4-11	1994	Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11	1994
IEC 61032	- ¹⁾	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	1998 ²⁾
CISPR 14	Series	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus	EN 55014	Series
CISPR 15	2000	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	EN 55015	2000
ISO 306	1994	Plastics - Thermoplastic materials - Determination of Vicat softening temperature (VST)	EN ISO 306	1994

1) Undated reference.

2) Valid edition at date of issue.

Annex ZB (normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions.

NOTE If it affects harmonization, it forms part of the European Standard.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

Clause Special national condition

101.1.1.2 Belgium, France, Spain, Switzerland

Electronic switches designed without an associated incorporated protection are loaded for one hour with the conventional tripping current of the associated protection of the lighting circuit (10 A for fuses and 16 A for CB's).

102.1 United Kingdom

Fuses according to BS 646 and BS 1362 are deemed to satisfy this requirement.

13.103 Denmark, Finland, Norway, Sweden, Switzerland, United Kingdom

Flexible cables complying with electrical strength test only are not allowed for external use.

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Annex ZC (informative)

A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CENELEC national member.

This European Standard falls under Directives 73/23/EEC and 89/336/EEC.

NOTE (from CEN/CENELEC IR Part 2:2002, 2.17) Where standards fall under EC Directives, it is the view of the Commission of the European Communities (OJ No C 59, 1982-03-09) that the effect of the decision of the Court of Justice in case 815/79 Cremonini/Vrankovich (European Court Reports 1980, p. 3583) is that compliance with A-deviations is no longer mandatory and that the free movement of products complying with such a standard should not be restricted except under the safeguard procedure provided for in the relevant Directive.

A-deviations in an EFTA-country are valid instead of the relevant provisions of the European Standard in that country until they have been removed.

<u>Clause</u>	<u>Deviation</u>
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13.103	Denmark
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(Stærkstømbekendtgørelsen- Elektriske Installationer 2001, § 521.7.4)

The insulation of external flexible cable shall comply with or be at least electrically and mechanically equivalent to that of flexible cables according to HD 21 or HD 22.

Finland	(Electrical Safety Act 410/1996, Degree of Ministry of Trade and Industry No. 1193/99, paragraph 4 Publication S10-2002 of the Finnish Safety Technology Authority, Finnish wiring rules SFS 1:6000-5-52 (HD 384.5.52), Clause 521, Table 52F)
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(Electrical Safety Act 410/1996, Degree of Ministry of Trade and Industry No. 1193/99, paragraph 4 Publication S10-2002 of the Finnish Safety Technology Authority, Finnish wiring rules SFS 1:6000-5-52 (HD 384.5.52), Clause 521, Table 52F)

The insulation of external flexible cable shall comply with or be at least electrically and mechanically equivalent to that of flexible cables according to HD 21 or HD 22.

Norway	(DSB: FEL 1998 §28 and §10, NEK 400:2002 Clauses 520.1 and 521.1 and Table 52A)
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(DSB: FEL 1998 §28 and §10, NEK 400:2002 Clauses 520.1 and 521.1 and Table 52A)

Cables with basic insulation are not accepted as wiring external to the switch. The insulation of external flexible cable shall comply with or be at least electrically and mechanical equivalent to that of flexible cables according to HD 21 or HD 22. Cables complying with the electric strength test only are regarded as internal cables and are accepted to be installed in enclosures, conduits, ducting and trunking systems and the like.

Sweden	(ELSÅK-FS: 1999:5, Clauses 520.1 and 521.1 and Table 52-1)
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(ELSÅK-FS: 1999:5, Clauses 520.1 and 521.1 and Table 52-1)

Cables with basic insulation are not accepted as wiring external to the switch. The insulation of external flexible cable shall comply with or be at least electrically and mechanical equivalent to that of flexible cables according to HD 21 or HD 22. Cables complying with the electric strength test only are regarded as internal cables and are accepted to be installed in enclosures, conduits, ducting and trunking systems and the like.



Corrigendum to EN 60669-2-1:2004

English version

Annex ZC

Replace the reference of the Swedish A-deviation by:

(ELSÄK-FS: 2004:1, Swedish National Electrical Safety Boards Regulations regarding design and erection of electrical installations)

December 2007

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

60669-2-1

Quatrième édition
Fourth edition
2002-09

**Interrupteurs pour installations électriques
fixes domestiques et analogues –**

**Partie 2-1:
Prescriptions particulières –
Interrupteurs électroniques**

(standards.iteh.ai)

**Switches for household and similar
fixed electrical installations –**

**Part 2-1:
Particular requirements –
Electronic switches**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
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- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

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

This fourth edition cancels and replaces the third edition published in 1996, amendment 1 (1997) and amendment 2 (1999). It constitutes a technical revision.

The text of this standard is based on the third edition, amendments 1 and 2, and on the following documents:

FDIS	Report on voting
23B/668/FDIS	23B/682/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 3.

This part of IEC 60669-2 shall be used in conjunction with IEC 60669-1. It lists the changes necessary to convert that standard into a specific standard for electronic switches.

In this publication, 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.

Annex AA is for information only.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

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

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