SVENSK STANDARD SS-EN 60669-2-1

Fastställd	Utgåva	Sida	Ingår i
2005-08-22	3	1 (1+47)	SEK Område 23

Svenska Elektriska Kommissionen, SEK

Strömställare för fasta installationer (installationsströmställare) i hushåll och liknande – Del 2-1: Särskilda fordringar på elektroniska strömställare

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

Som svensk standard gäller europastandarden EN 60669-2-1:2004. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60669-2-1:2004.

Nationellt förord

Europastandarden EN 60669-2-1:2004

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60669-2-1, Fourth edition, 2002 - Switches for household and similar fixed electrical installations - Part 2-1: Particular requirements - Electronic switches**

utarbetad inom International Electrotechnical Commission, IEC.

I bilaga ZB redovisas en svensk avvikelse, vilken av CENELEC accepterats till följd av speciella nationella förhållanden. I bilaga ZC redovisas en svensk avvikelse föranledd av myndighets föreskrifter.

Standarden skall användas tillsammans med SS-EN 60669-1, utgåva 2, 2000.

Tidigare fastställd svensk standard SS-EN 60669-2-1, utgåva 2, 2000 och SS-EN 60669-2-1/A2, utgåva 1, 2002, gäller ej fr o m 2009-07-01.

ICS 29.120.40

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK, som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

Svenska Elektriska Kommissionen, SEK, svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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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)

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

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

Ref. No. EN 60669-2-1:2004 E

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.

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

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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.

Publication	Year	Title	EN/HD	Year
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

Publication	Year	Title	EN/HD	Year
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.

CONTENTS

SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS –

Part 2-1: Particular requirements – Electronic switches

1 Scope

This clause of part 1 applies except as follows.

Replacement:

This standard applies to electronic switches and to associated electronic extension units for household and similar fixed electrical installations either indoors or outdoors.

It applies to electronic switches for a.c. only, for the operation of lamp circuits and the control of the brightness of lamps (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), with a rated voltage not exceeding 250 V and a rated current not exceeding 16 A.

The operation and control as mentioned above are performed by a person via an actuating member, a sensing surface or a sensing unit, by means of touch, proximity, turn, optical, acoustic, thermal or any other influence.

This standard also applies to electronic switches where the operation or control is made by physical means, for example, light, wind velocity, presence of persons, etc.

This standard also applies to boxes for electronic switches, with the exception of mounting boxes for flush-type electronic switches.

Electronic switches complying with this standard are suitable for use at ambient temperature not normally exceeding 25 °C but occasionally reaching 35 °C.

In locations where special conditions prevail, such as in ships, vehicles and the like and in hazardous locations, for example, where explosions are liable to occur, special constructions may be required.

NOTE 1 This standard is not intended to cover devices which are designed to be incorporated in appliances or are intended to be delivered together with a specific appliance and which are within the scope of IEC 60730 or IEC 61058-1.

Examples of designs of electronic switches and functions are shown in annex AA.

NOTE 2 Electronic switches without a mechanical switch in the main circuit do not provide a “full off-state”. Therefore, the circuit on the load side should be considered to be live.

2 Normative references

This clause of part 1 applies except as follows.

Addition:

IEC 60065:2001, *Audio, video and similar electronic apparatus – Safety requirements*

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

IEC 60127 (all parts), *Miniature fuses*

IEC 60227-5:1997, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 5: Flexible cables (cords)*[1)]

IEC 60317-0-1:1997, *Specifications for particular types of winding wires – Part 0: General requirements – Section 1: Enamelled round copper wire*[1)]

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

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*

IEC 61000-3-2:2000, *Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16A per phase)*[1)]

IEC 61000-3-3:1994, *Electromagnetic compatibility (EMC) – Part 3: Limits – Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current ≤ 16 A*[1)]

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

IEC 61000-4-3:2002, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

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

IEC 61000-4-5:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 5: Surge immunity test*[1)]

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1) A consolidated version of this standard exists.

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*[1)]

IEC 61000-4-8:1993, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 8: Power frequency magnetic field immunity test*[1)]

IEC 61000-4-11:1994, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 11: Voltage dips, short interruptions and voltage variations immunity tests*[1)]

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

CISPR 14 (all parts), *Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus*

CISPR 15:2000, *Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment*

ISO 306:1994, *Plastics – Thermoplastic materials – Determination of Vicat softening temperature (VST)*

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1) A consolidated version of this standard exists.